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Our Number Workshop












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THE 1955 EDITION

by Maurice L. Hartung
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Our Number Workshop 1 is part of The Basic Mathematics Program, a unit in the Curriculum Foundation Series. It is designed for use in any first-grade arithmetic class, and is available in both pupil's and teacher's editions. The Teacher's Edition contains a Teaching Guide section that gives detailed directions for using *Our Number Workshop 1*. The Teaching Guide includes a discussion of the arithmetic skills and concepts used on each Worksheet, instructions for teaching the number ideas and the skills the children must have to do the exercises in the *Workshop*, and detailed directions for the use of each Worksheet.

Provision is made for individual differences by suggesting ways in which the teacher can adapt the directions she gives, the length of time allowed for doing the work, and the amount of work to be done on any one page to the needs of a particular group. Very brief directions for the use of each Worksheet are included on the Worksheet. The directions on the Worksheet are a summary of the complete directions in the Teaching Guide, and are intended only as a convenient reminder for the teacher, not as a substitute for the detailed notes. For those who use *Numbers We See*,[1] a reference to the page in that book with which each Worksheet may be used is given on the Worksheet.

The five fundamental number ideas included in *Our Number Workshop 1* are: Correspondence (counting, positional use of number); Number Relationships (grouping numbers to 10, readiness for the basic facts); Number System (to 99); Measurement (concept of a standard unit); Money (dime, nickel, penny, and their equivalent values).

Our Number Workshop 1 has five distinctive characteristics that grew out of strict adherence to a set of criteria aimed at developing number understandings to their fullest extent.

1. Independent work by the child is provided for in the exercises. On almost every Worksheet the teacher need work through only the first exercise with the children. They should then be able to complete the Worksheet on their own. Occasionally (especially with less able children) it may be necessary to give a second set of directions. Only four Worksheets require teacher direction throughout.

2. Responses required of the child are as simple and free from laboriousness as possible. Only two Worksheets (18 and 41) require the child to do some simple drawing. There are no pasting or coloring exercises in *Our Number Workshop 1*. Such time-consuming responses contribute little or nothing to the learning of concepts of arithmetic.

3. The working time required for each Worksheet is largely thinking time. This is accomplished by the use of very simple response symbols, such as ●, ○, =, X, and ≋ (scribble). The child's attention is kept centered on number concepts. His thinking is not interfered with by exercises that require him to concentrate on complex and time-consuming methods of responding.

4. The response symbols used in *Our Number Workshop 1* can be copied by the child without interfering with his newly developing numeral writing skills. The use of simple symbols avoids the tensions that frequently arise when the child is learning to write. At this stage of learning, the writing of number symbols is difficult and tedious for many children and may become an interference factor in making responses. Although the child is not required to write the number symbols, he does learn to recognize them.

5. Color is used in a functional, rather than a merely decorative, way. One type of functional use of color may be observed on Worksheets 2, 3, 9, 51, and 76, where colored squares or strips indicate the places where the child is to write his responses. Another functional use of color is illustrated on Worksheets 6, 10, 13, and 20, where key objects that are to be matched, combined, or compared with other objects on the Worksheet appear in color.

The only extra materials required for the work in *Our Number Workshop 1* are a supply of 2-inch sticks for use in the exercises on linear measurement (Worksheets 33-37 and 91-92) and a supply of markers for each child. It is desirable to have as great a variety of markers as possible, and objects suitable for this purpose are suggested throughout the Teaching Guide. For all other Worksheets only soft pencils or crayons are needed.

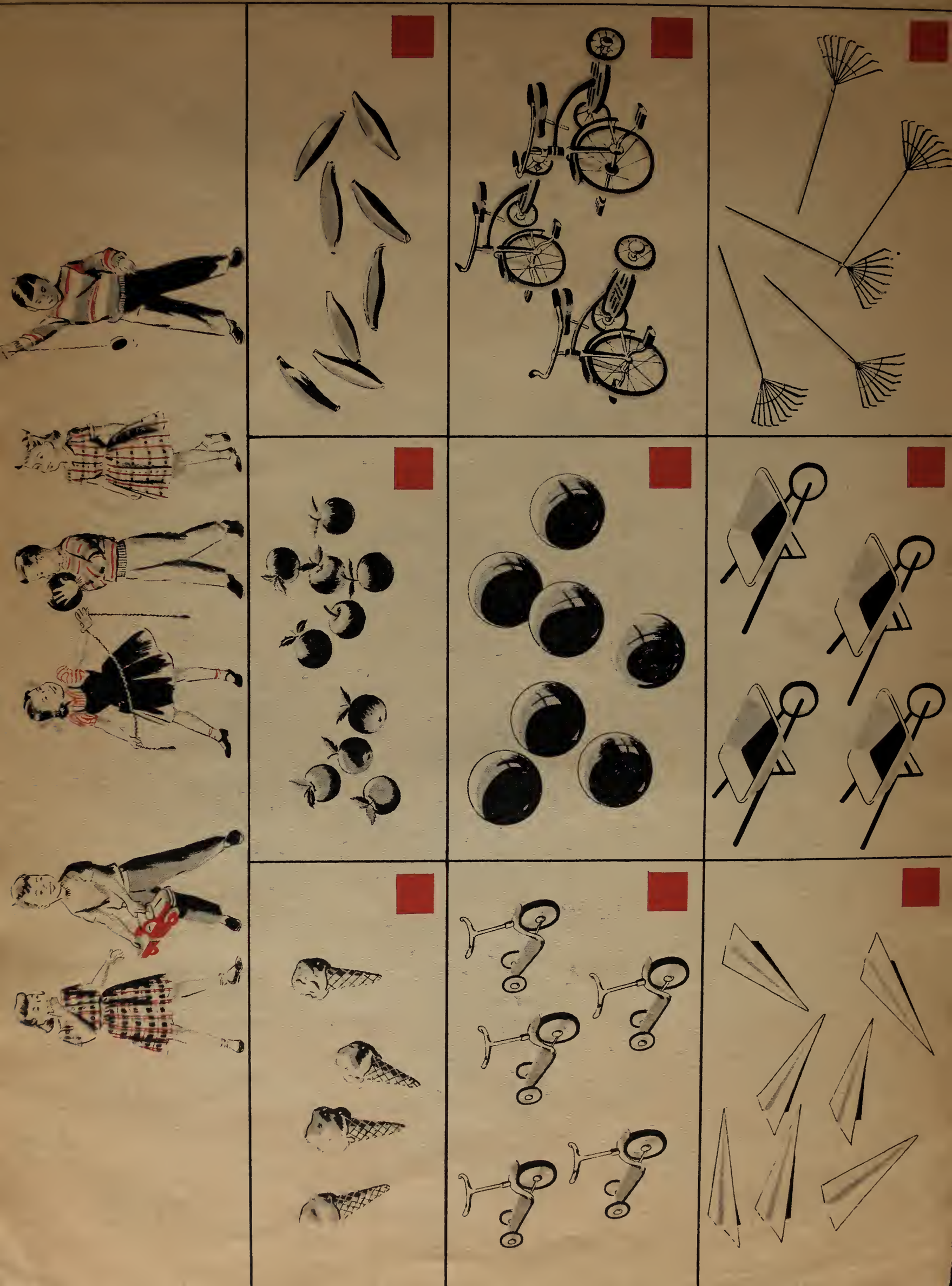
[1] **Numbers We See**, Teacher's Edition, by Maurice L. Hartung, Henry Van Engen, Anita Riess, and Catharine Mahoney. Scott, Foresman and Company.

Many-Few (Page 4 **Numbers We See**). Let the children talk about the picture. Then direct their attention to the dogs. Ask the children whether there are many dogs playing or only a few. Let them give reasons for their decision. They should decide that there are many dogs. Now direct their attention to the small pictures at the bottom of the page. Tell them that each small picture has in it something that is in the big picture, and that the thing in the small picture stands for the same thing in the big picture. Now direct attention to the red squares in the small picture. Ask each child to draw a line from the small picture of (Directions continued on page 97).

Answer Key (Page 4, Numbers We See) On this page the children will decide which pictures show many and which show just a few. Give directions similar to the following: "Look at the first picture and think whether the little boy has many toy animals to play with or just a few. If he has many toy animals, put this mark, ●, in the red square. If you think he has just a few toy animals, put this mark, ○, in the red square." Demonstrate the correct marks on the blackboard and be sure that all the children understand the meaning of each mark. Direct the children to complete the rest of the work on this page independently. When the work is finished, let the children justify their answers.

Many-Few (Page 5 **Numbers We See**). First have the children pretend that these pictures show things that Don saw in the country. Tell them they are to decide whether each picture shows many objects or just a few. Direct their attention to the first picture and say: "Does the little boy have many toys to play with? If you think he has many toys, put this mark, ●, on the red barn at the top of the picture. If you think he has just a few toys, put this mark, O, on the red barn." Have the children follow the same procedure independently for the rest of the pictures on the page. Be sure they remember to think of the country when they look at each picture. (Directions continued on page 97)

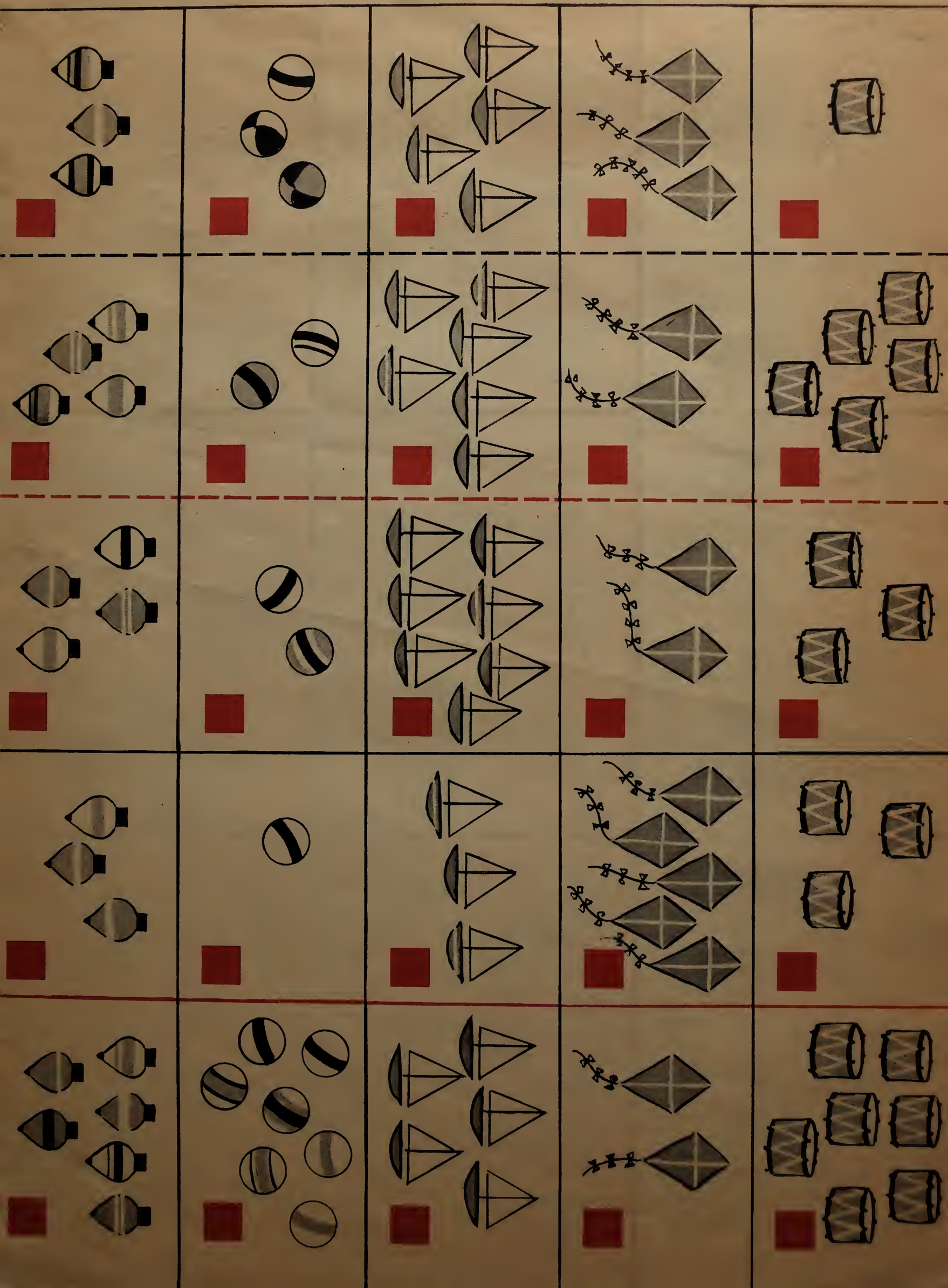
Simple Pairing (Pages 4 – 7 **Numbers We See**) Each child will need six markers, such as small pieces of paper, buttons, or stones. Say: "We are going to find out if there are enough things in each picture for each child to have one. Are there enough ice-cream cones for each of the children? To find out, put a marker on each child and then move the markers one at a time to the ice cream cones. If there is more than one cone for each child, put this mark, ●, in the red square. If there are not enough, put this mark, O, in the red square." Have the children continue the same procedure for all the other pictures on the page.



Simple Pairing (Page 8 **Numbers We See**). Give each child five markers. Discuss the marks that mean **just enough, too many,** and **not enough** (● for too many, O for not enough, = for just enough). Then have the children use markers with the first picture to determine whether there are just enough toy trucks for each boy to have one, not enough trucks, or too many trucks. Have them put a marker on each boy and then move the markers one by one to the trucks (or draw lines). Tell them to put the correct mark in the red square. Direct them to continue in the same way for the other pictures. The pictures with the red background will be used later with page 7.

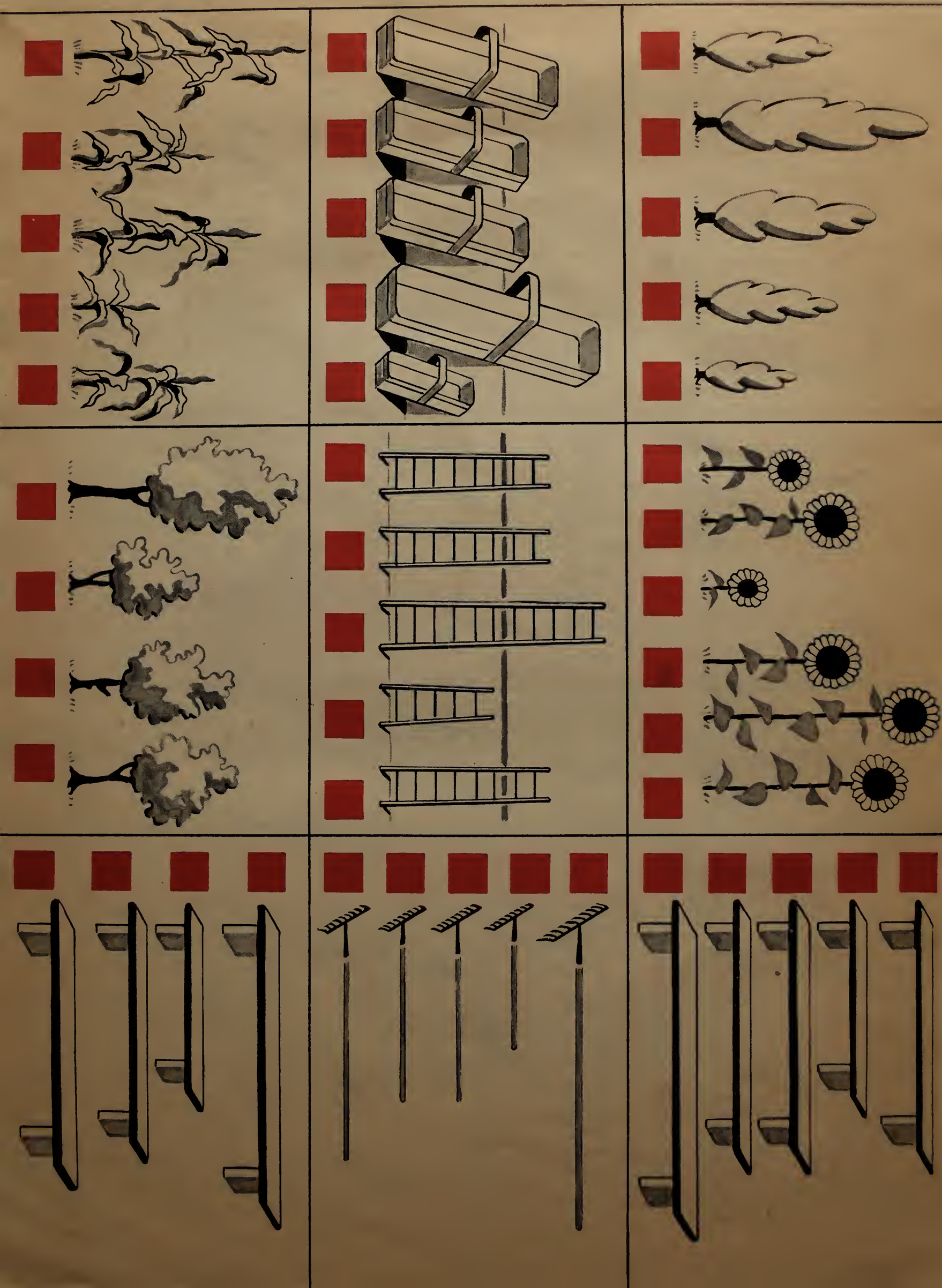
Sheets Pairing Pages 4 Numbers We Feel Give each child six markers. Be sure the children know the marks that mean too many, ●, just enough, —, and not enough, O. Direct attention to the first picture. Explain that the objects in the red part of each picture need the things in the white part. Show the children how to move markers from cars to garages (or draw lines from cars to garages) to find out if there are enough garages for the cars. Each child will show whether there are just enough, not enough, or too many garages by putting the correct mark in the red square. The children should work independently on the other pictures.

Simple Pairing; as many as, more, fewer (Page 9 **Numbers We See**). On this page the children will use the colored strip of pictures from page 5. Have the children place page 5 over page 7 so that the outside edge of page 5 is against the solid red vertical line on poge 7. If any of the children have difficulty folding the poge, the red strip on page 5 con be cut off and placed against the solid vertical line on page 7 (see the pictures on page 97). Have them look at the drums on the red strip and then at the drums on the white strip. Say: "Are there more drums in the white picture than in the red picture?" (Directions continued on page 97)



Big, Large, Little, Small (Page 10 **Numbers We See**). In each picture the children are to indicate the objects that are largest and smallest and also objects that are the same size. Direct attention to the wheelbarrows. Say: "Find the largest wheelbarrow. Draw a line from it to the red answer square that has this mark, ●, in it. Now find the smallest wheelbarrow. Draw a line from it to the square that has this mark, O, in it. Are any of the wheelbarrows the same size? Draw a line joining all the wheelbarrows that are the same size." Have them work independently in the same way for the rest of the pictures.

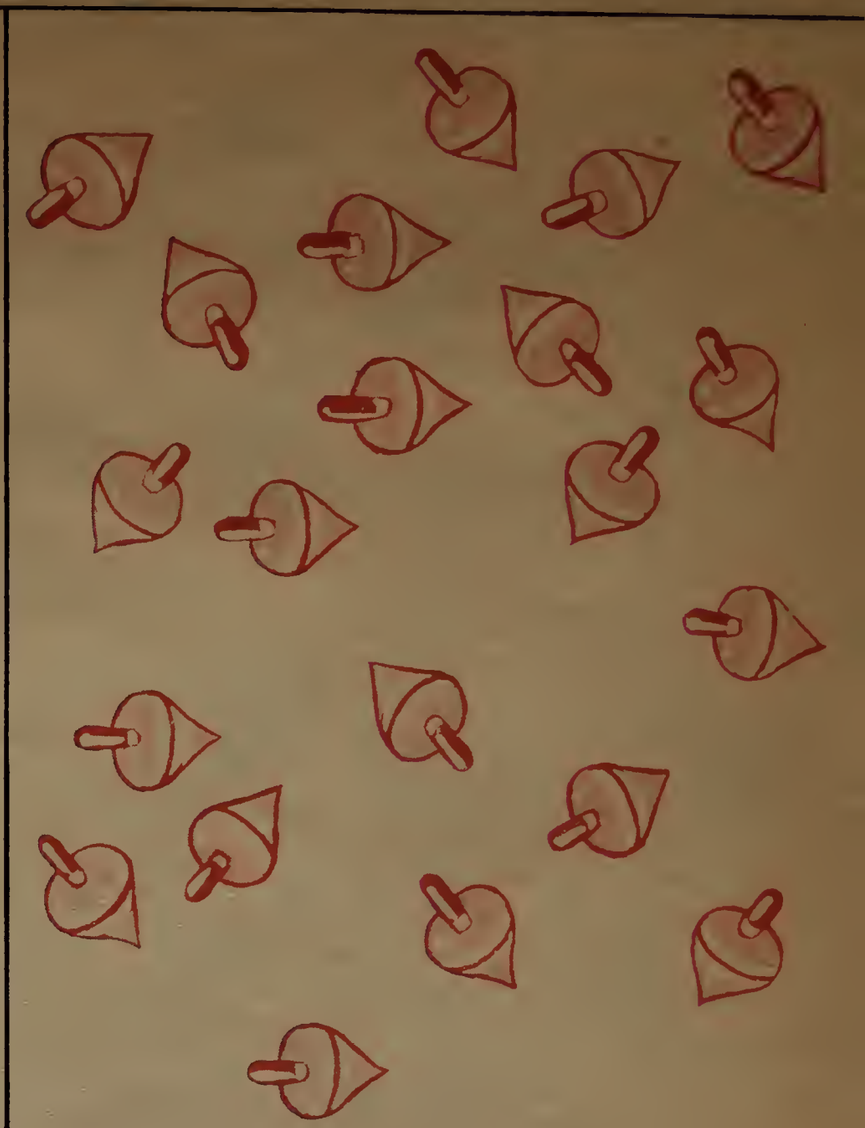
Tall, Short, Long (Page 10 **Numbers We See**). On this page the children are to indicate the **tallest** (or **longest**) objects, the **shortest** objects, and those that are the **same height** or **length.** Say: "Look at the trees in the first picture. Which tree is the shortest? Put this mark, O, in the red square under that tree. Now find the tallest tree and put this mark, ●, in the red square under that tree. Now find as many trees as you can that are the same height and put this mark, =, in the red square under each one." The children should work independently in the same way for the other pictures on the page.

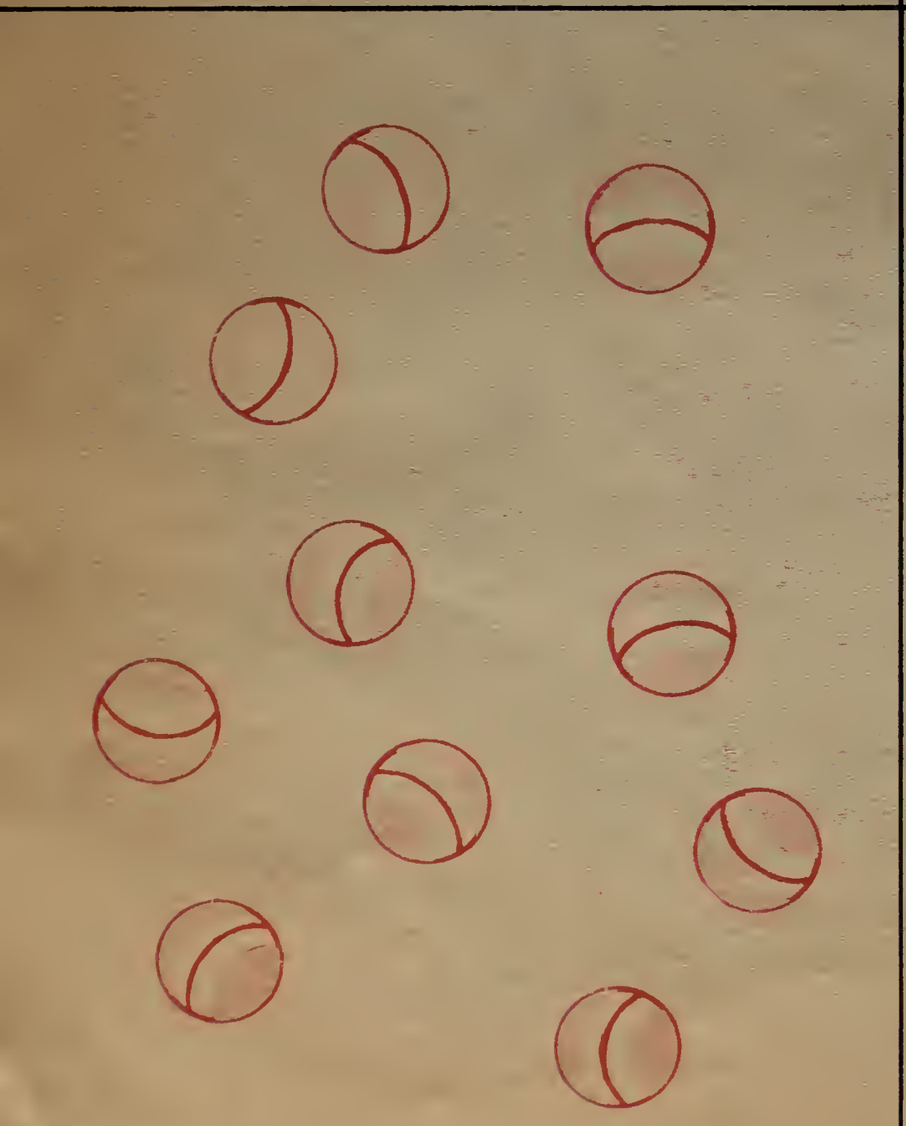


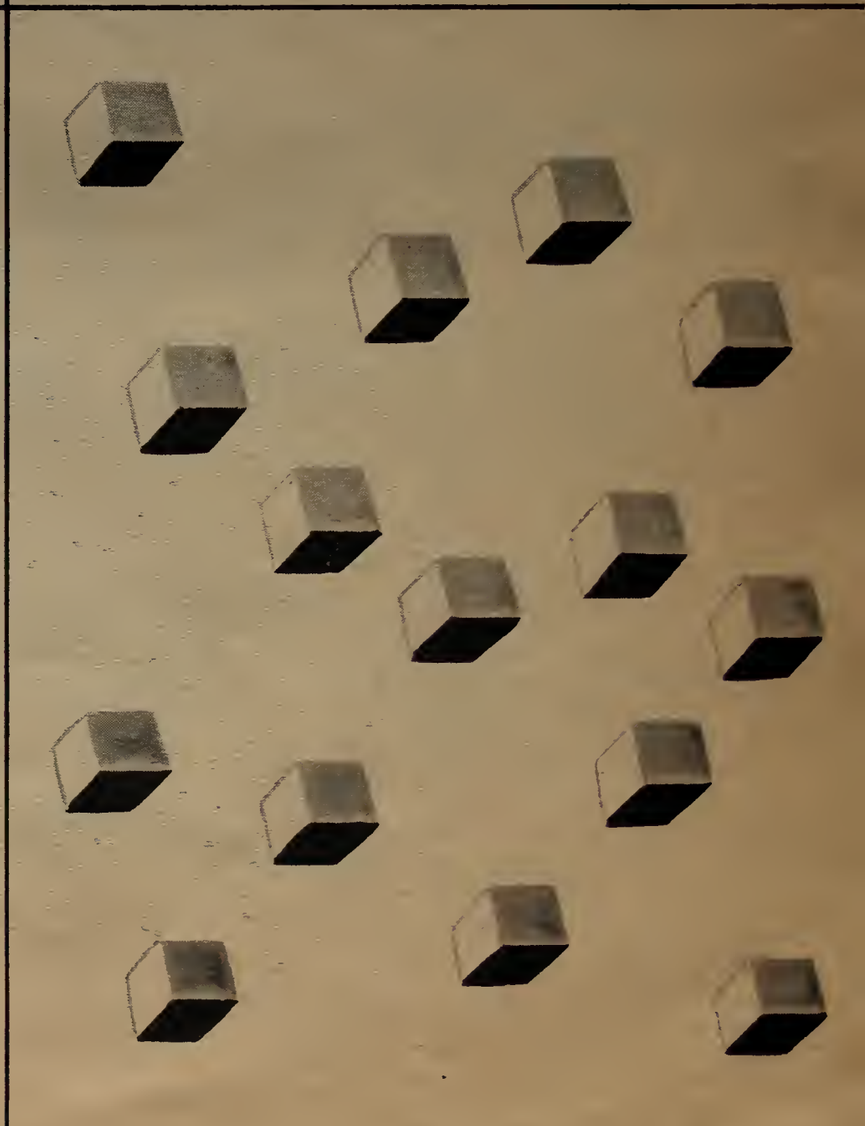
Tall, Short, Long, Big, Little, Small (Page 10 **Numbers We See**). Direct attention to the flowers in the first picture. Say: "Look at the flower in the red strip. Find as many flowers as you can in the white strip that are shorter than it. Put this mark, O, in the red square under each flower that is shorter. Now find flowers that are taller than the one in the red strip. Put this mark, ●, in the red square under each flower that is taller. Find the flowers that are just as tall as the one in the red strip. Put this mark, =, in the red square under each one." Have the children work independently in this way for all the other pictures.

Two and Three (Page 11 **Numbers We See**). The children are to identify groups of two and three. Tell the children to look at the first picture and decide whether there are two chickens or three chickens. If there are two chickens, tell them to put this mark, X, in the white square. If there are three chickens in the picture, tell them to put the mark (X) in the red square. Be sure they understand that they are to put a mark in only one square in each picture. Direct the children to follow the same procedure for each of the other pictures on the page.

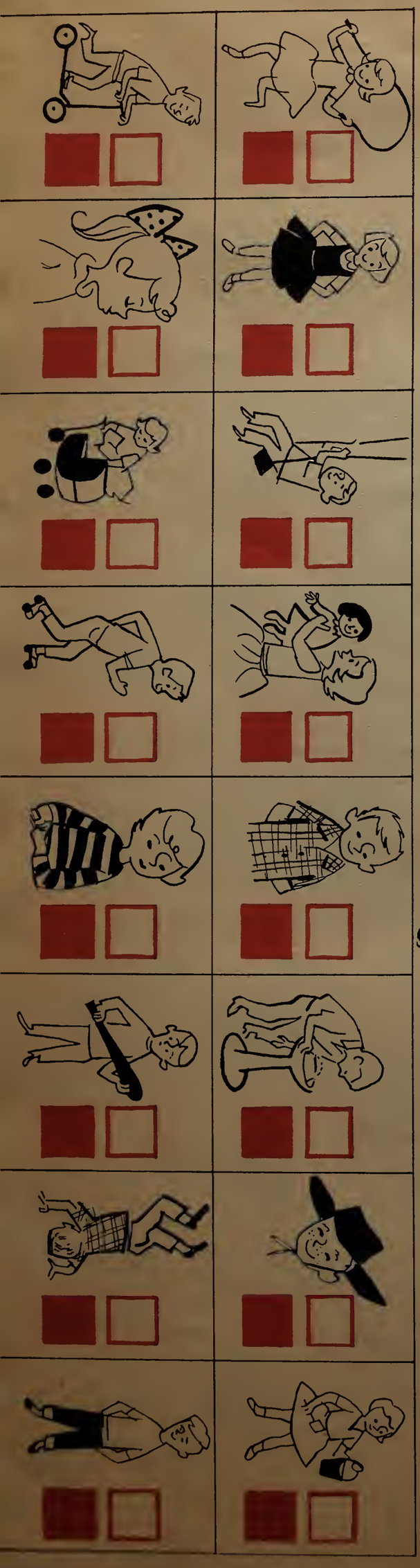
Two and Three (Page 11 **Numbers We See**). On page 12 the children are to encircle groups of two and three. Direct attention to the balls. Tell the children that they are to see if they can put all the balls into groups of **two**. Remind the children that, when objects are put in groups, the objects should be rather close together. It might be well to have the children make circles around the groups of two with their fingers before they make circles with their pencils. Tell the children that the jacks are to be put in groups of **three**. The blocks and the tops are to be put in groups of both **two** and **three**. (Directions continued on page 97)

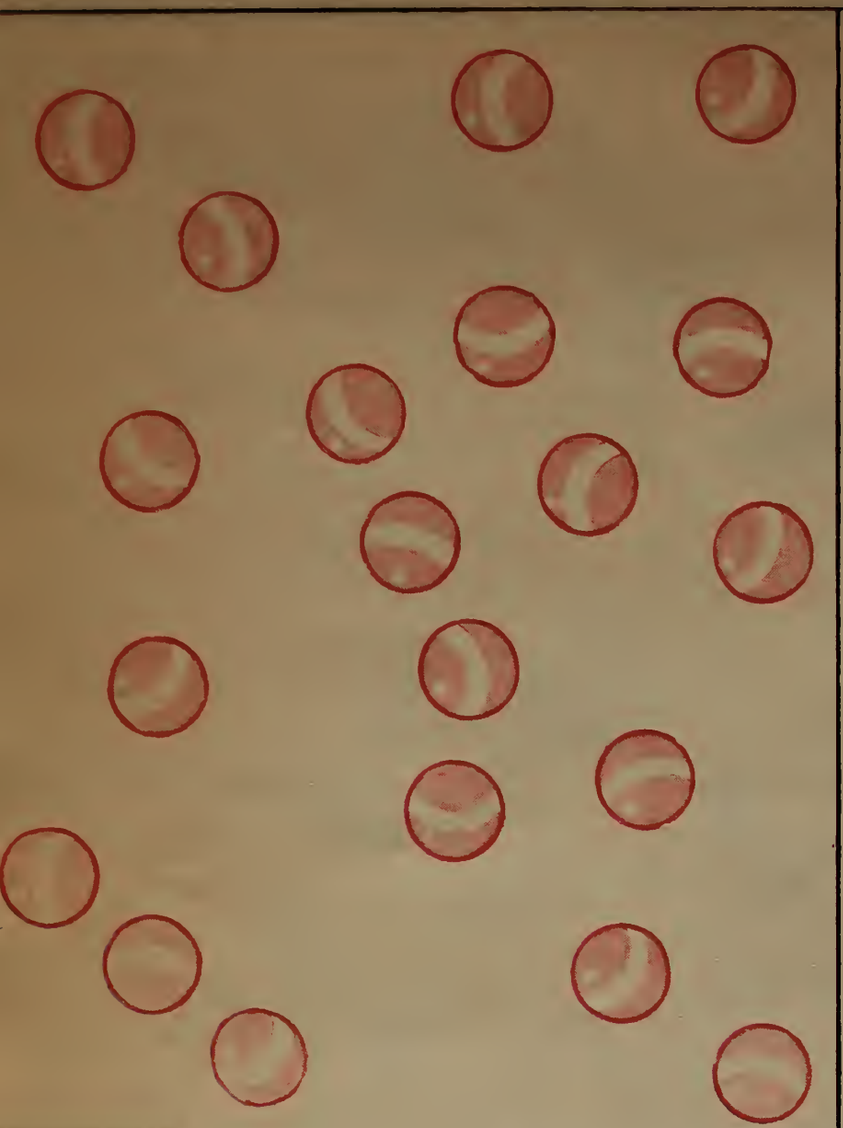


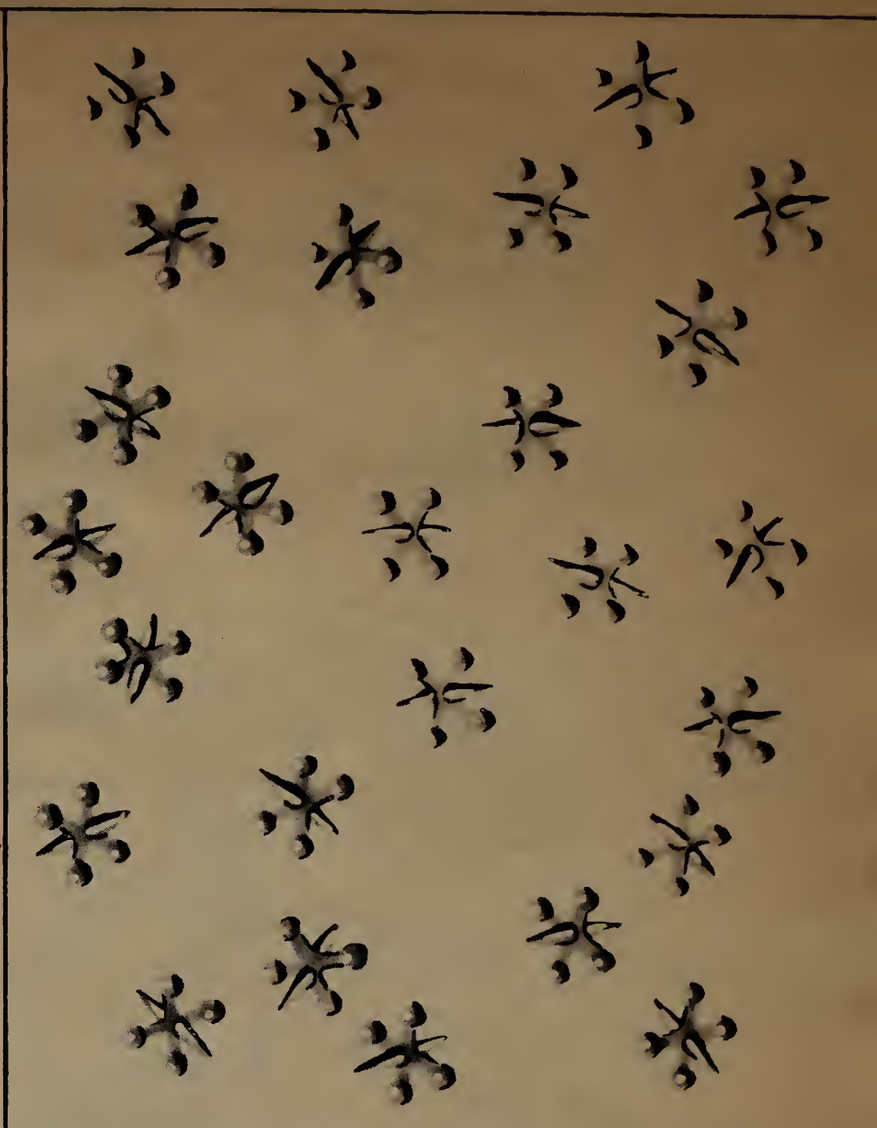


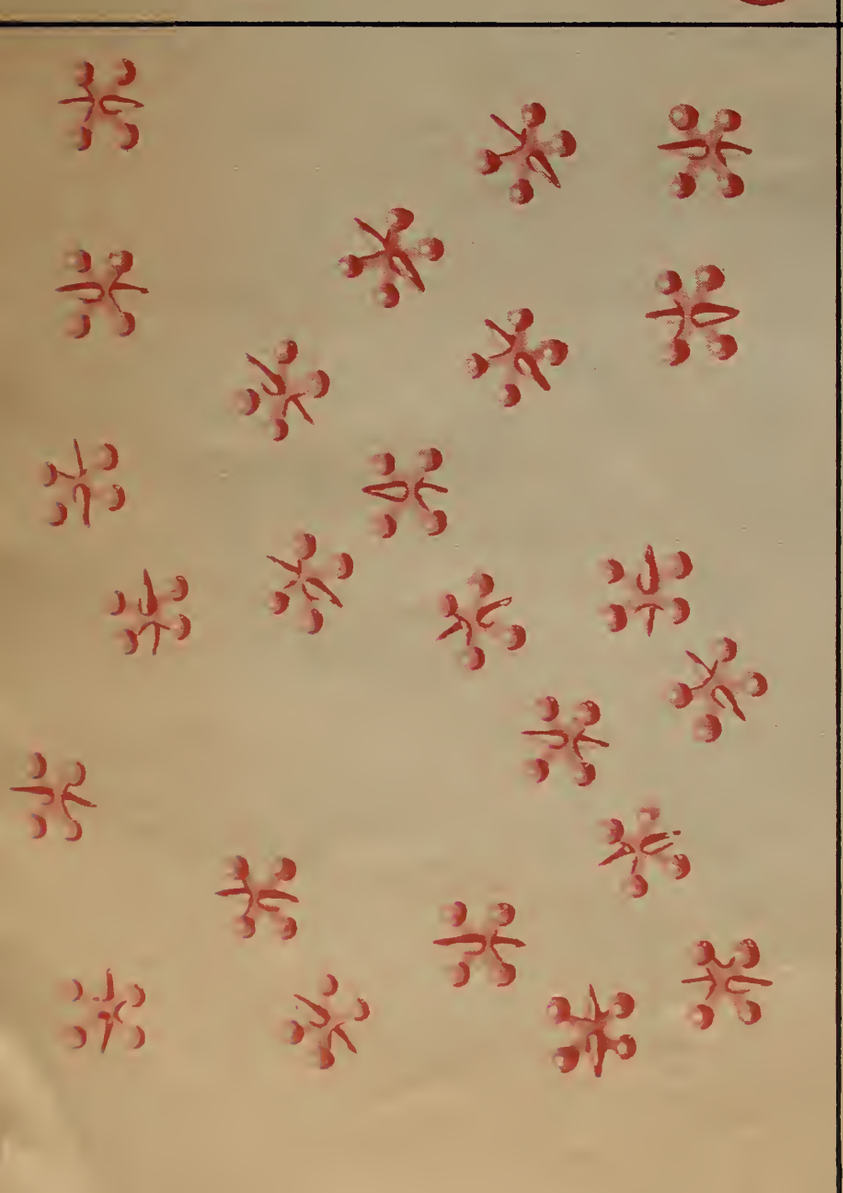


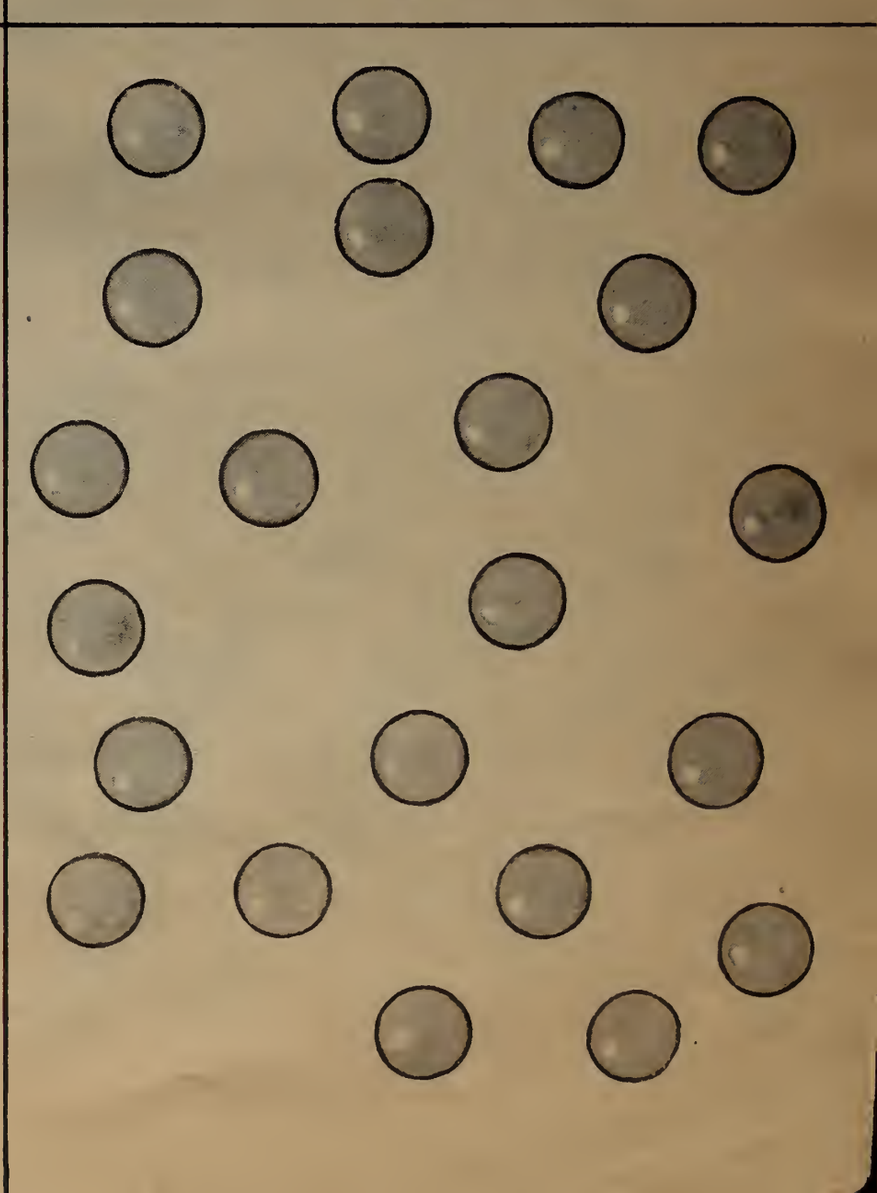
Two and Three (Page 13 **Numbers We See**). Give each child three markers. Tell them they are to find groups of children in the big picture who are alike because of something they are wearing or doing or playing with. Direct attention to the the first small picture at the bottom of the page and ask what is special about it. Say: "Look at the big picture and put a marker on each girl who is jumping rope. If there are two girls jumping rope put this mark, X, in the open square in the little picture. If there are three girls jumping rope put an X in the solid red square. Now do the some things for each of the small pictures at the bottom of the page."











Two, Three, and Four (Page 14 Numbers We See) Direct attention to the picture of the red jacks. Tell the children that they are to see if they can put all the red jacks into groups of **four**. Have the children make circles around the groups of four with their fingers before they make circles with their pencils. Remind them that they must not use an object more than once. Tell the children that the red balls are to be put into groups of **two, three**, and **four**. Watch to be sure all the children are following the directions. The black balls and the black jacks are also to be put in groups of two, three, and four. Encourage the children to plan the groups so there will be no objects left over.

Positional Meaning of 1 to 5 (Page 16 **Numbers We See**). Direct attention to the ponies in the first picture and say: "Look at the group of ponies and find pony number 2, counting from this side to the left]. If pony number 2 is red, draw a line under him. Do the same for each of the other pictures." After the children have completed this part of the work, give them the following directions: "Look at each picture again and find pony number 4. Every time pony number 4 is red, put a line over him." When the children have done this, give them the following directions: "Look at the pictures again. Whenever pony number 3 is red, draw a circle around him."

Two, Three, and Four (Page 14 **Numbers We See**). Direct attention to an object more than once. Tell the children that the red balls are going into crowds of **two, three** and **four**. Watch to be sure all

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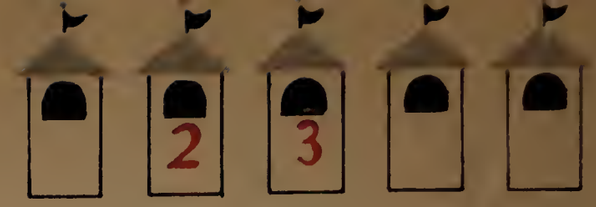

2 1 4 5 3

3 2 4 1 5

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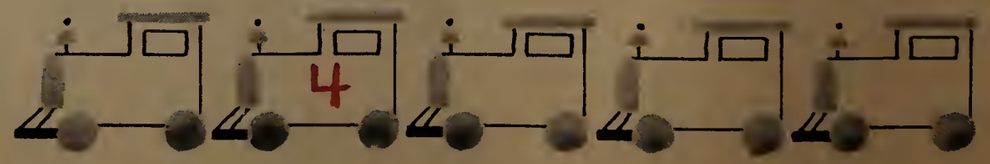
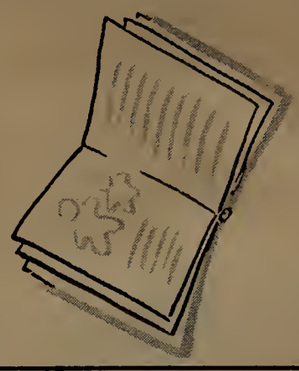


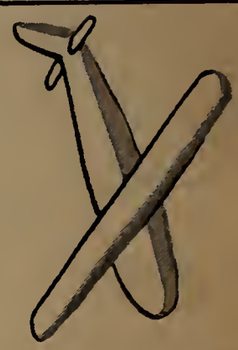
3 5 4 1 2

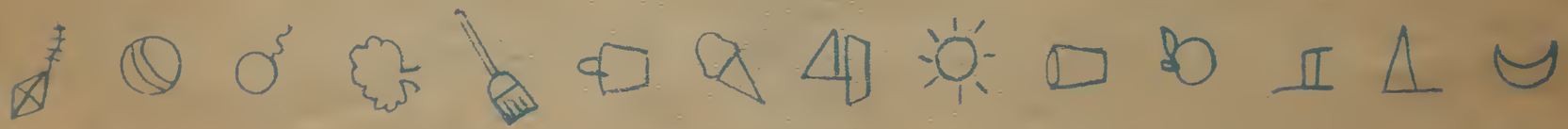
Positional Meaning of 1 to 5 (Page 17 Numbers We See). Direct the children to look at the cars on page 17. Say: "Each car should have a number on it to show which is number 1, which is number 2, and so on. Be sure you know which way the numbers go. Find a car that does not have a number. Find this number in the row of numbers under the cars. Put a ring around the number and draw a line from the number to the car it should be on. Find another car that does not have a number. Find this number in the row of numbers and draw a ring around it. Draw a line from it to the car." The children should work independently on the other pictures.

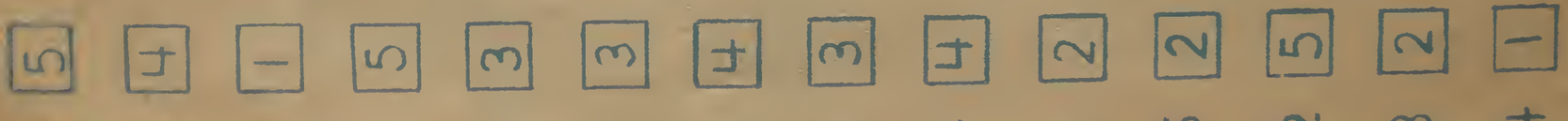
Positional Meaning of 1 to 5 (Page 17 **Numbers We See**). Direct attention to the first picture and say: "Put your finger on balloon 1, counting from this side [point to left]. What number is the blue balloon? Find the number here [point to the black numbers]. Draw a circle around that number." Tell the children to do this for each picture. After they have completed the work, direct attention again to the first picture and say: "Now decide what number the blue balloon is, counting from this side [point to the right]. Find the number here [point to the blue numbers]. Put a circle around that number. Do this for each of the other pictures."

Positional Meaning of 1 to 5 (Page 18 **Numbers We See**). By means of the large pictures, help the children locate the rows and boxes—the doll buggy is in Row 1 Box 1, the book is in Row 3 Box 4, etc. Then say: "Look at the blue numbers and the little blue pictures at the edge of the page. The first one tells you to draw a kite in Row 3 Box 5. Find Row 3 Box 5 and draw a kite in it. The next one tells you to draw a ball in Row 5 Box 4. Find the box and draw a ball in it. Draw the other pictures in the correct boxes."









3 5 2 — 4 5 — 3 4 2 5 2 3 4

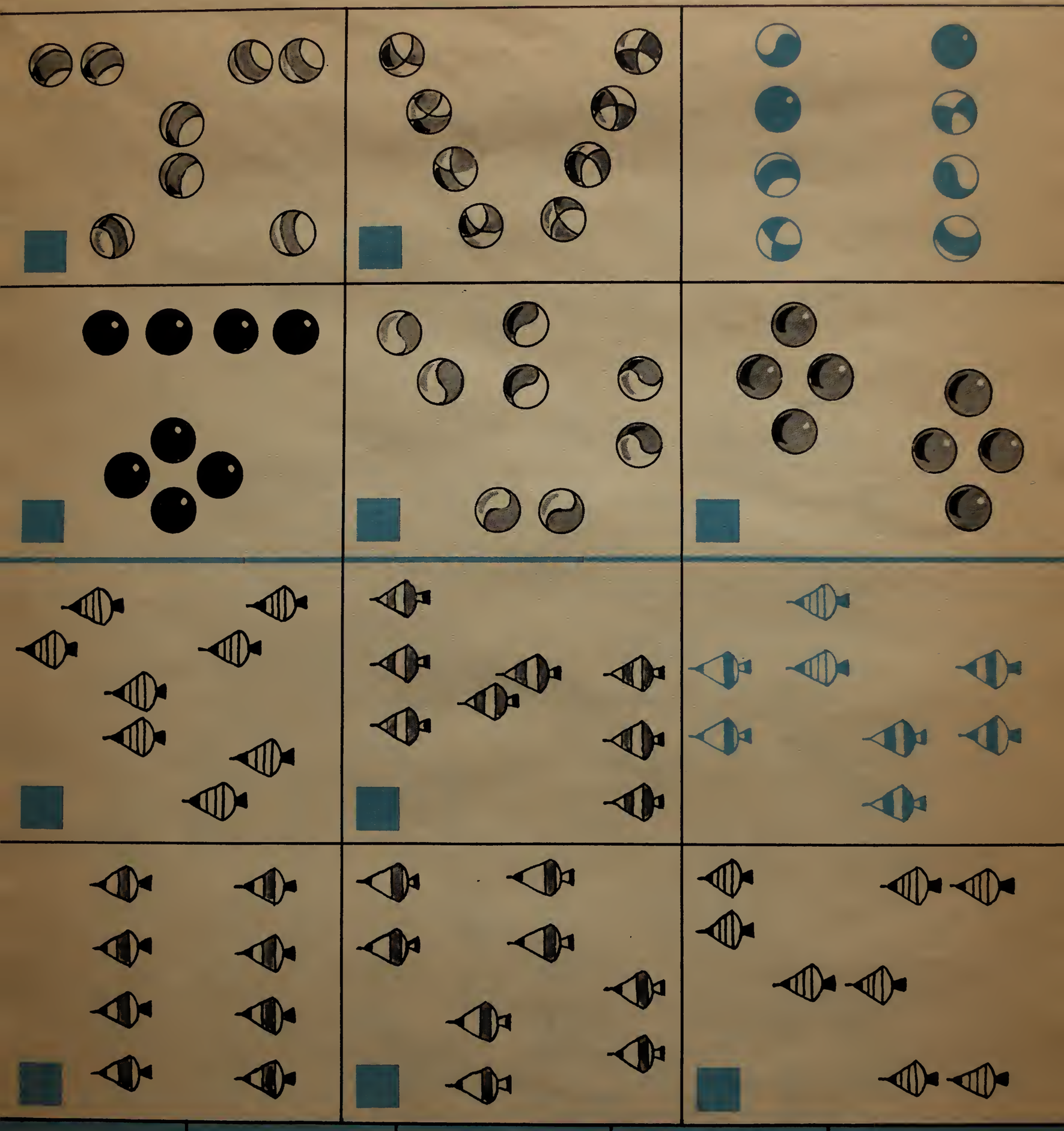
Review (Page 19 **Numbers We See**). For each picture the children are to indicate the number of objects and then to indicate the longest (or tallest, largest) object, the shortest (or smallest) object, and the objects that are equal in size or length. Explain that they are not to use the pictures in the blue strip. Direct attention to the first picture. Say: "Look at the horns. How many horns are in the picture? Find the number above the horns that tells how many horns there are. Draw o circle around this number. Do this for each picture." When this has been done for all the pictures, draw (Directions continued on page 97)

6 as 4,2; 3,3; 2,2,2 (Page 20 **Numbers We See**). Direct attention to the first picture and say: "Look at the blue scooters. Find a group of black scooters to put with the blue ones so that there will be six scooters in all. Draw a circle so that it will be around six scooters. Be sure that all the blue ones and enough black ones are in the circle." The children are to make a group of six objects in each picture, in each case using the entire group of blue objects and complete groups of block objects. They must not use part of a group.

6 as 4,2; 3,3; 2,2,2 (Page 20 **Numbers We See**). The children will use the blue strip of pictures from page 19. See the directions on page 7 for use of this strip of pictures. When each child has the blue strip in position, say: "Look at the sand pails on the blue strip and on the white strip. Are there just 6 sand pails in all? If there are just 6 sand pails, put this mark, X, in the blue square. If there are not just 6 sand pails in all, put this mark, ≋ (scribble), in the blue square." Have the children use the pictures on the blue strip in the same way with the other pictures on this strip and with all the pictures on the other four white strips.

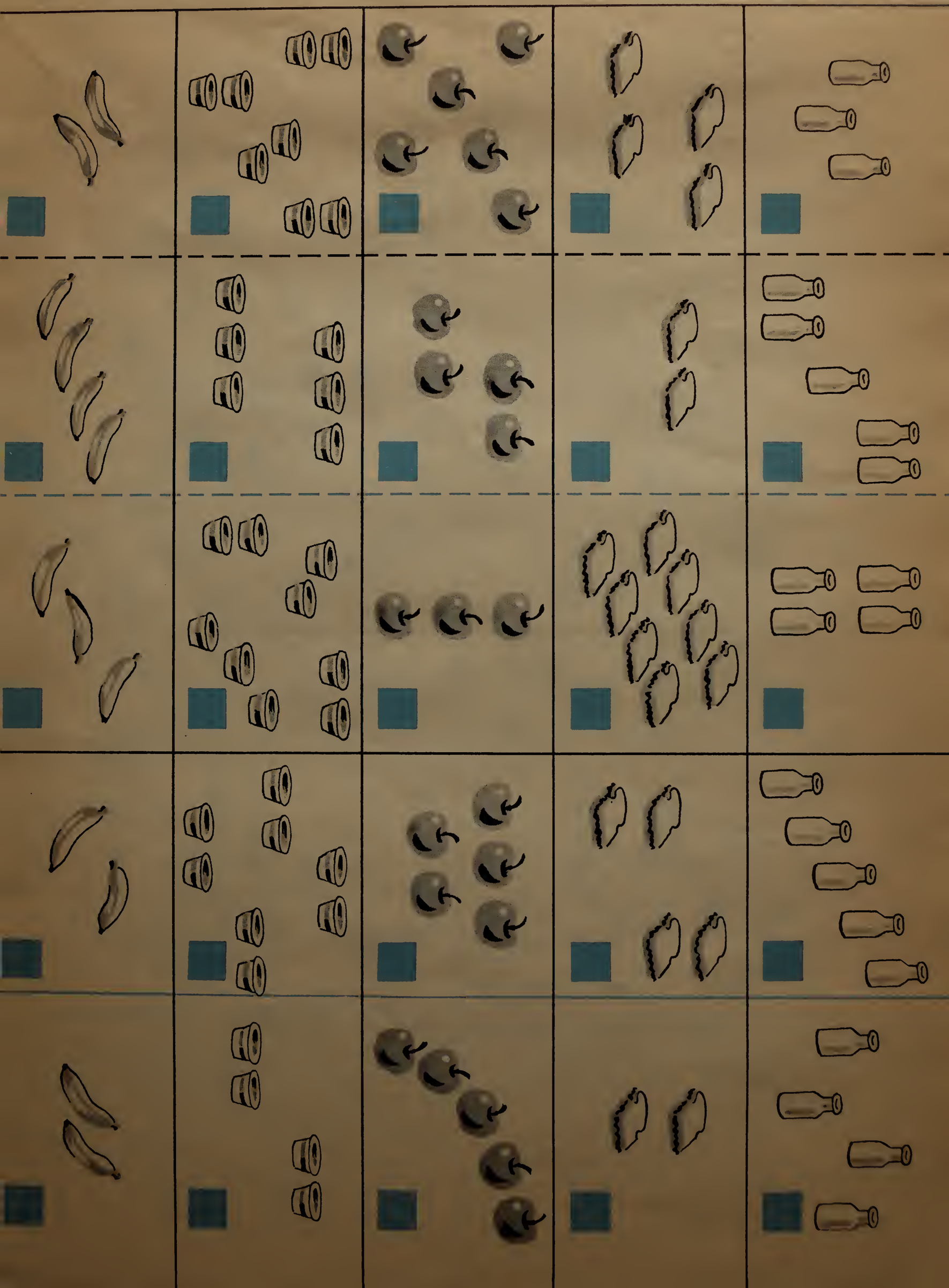
8 as 4,4; 2,2,2,2 (Page 21 **Numbers We See**). Direct attention to the first picture and say: "Look at the blue benches. Find a group of black benches to put with the blue ones so that there will be eight benches in all. Draw a circle so that it will be around the eight benches. Be sure that all the blue ones and enough black ones are in the circle." The children are to make a group of eight objects in each picture, in each case using the entire group of blue objects and complete groups of black objects.

8 as 4,4; 2,2,2,2 (Page 21 **Numbers We See**). Direct attention to the picture of the blue balls. Say: "How many groups of balls are there? How many balls are there in each group? How many balls are there in all? Look at the picture under the picture of the blue balls. Are the eight balls in two groups of four? If they are, put this mark, X, in the little blue square in the corner of the picture. If they are not, put this mark, ≋ (scribble), in the little blue square. Look at each of the other pictures of balls and decide whether it shows two groups of four. If it does, put this mark, X, in the blue answer (Directions continued on page 97)

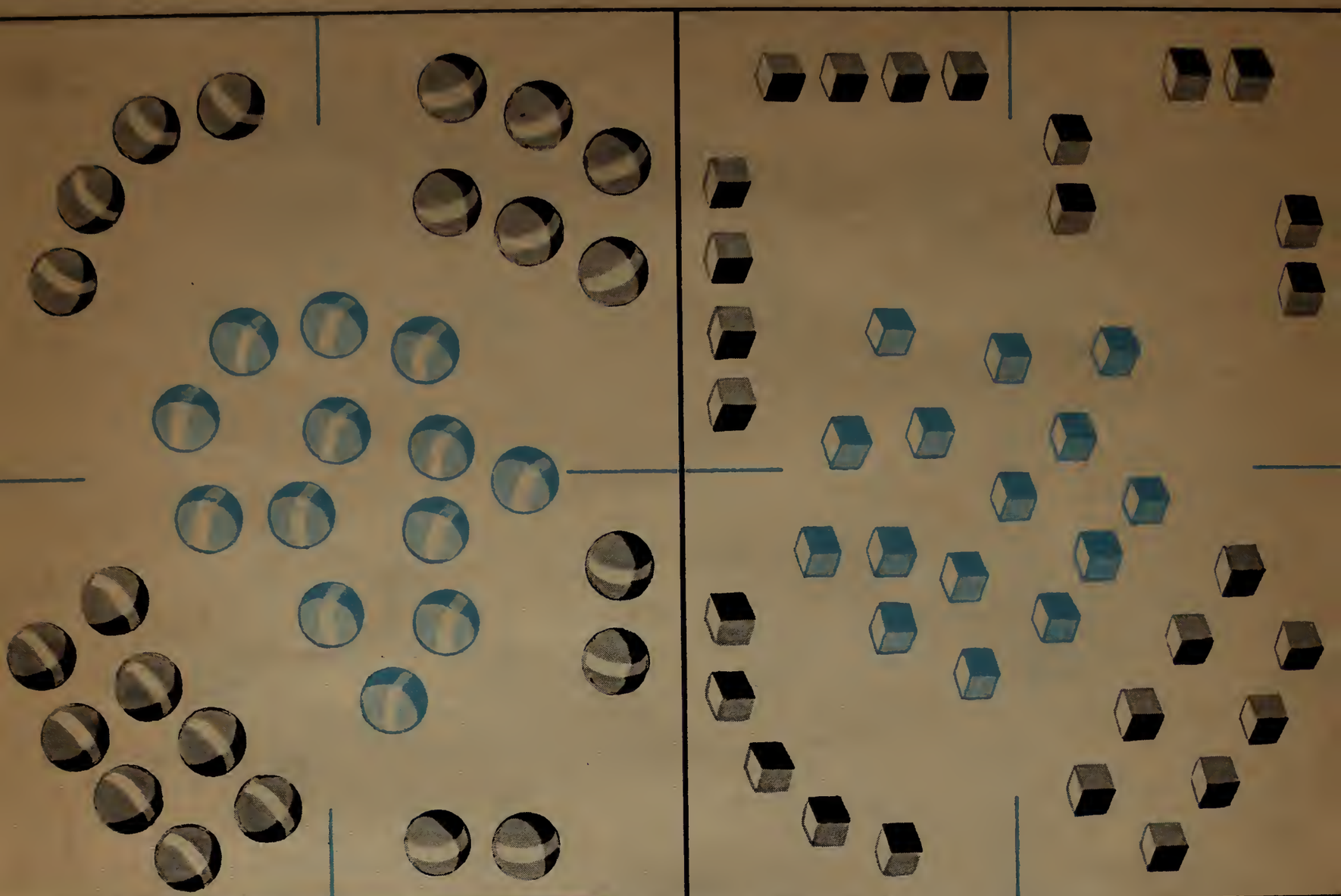


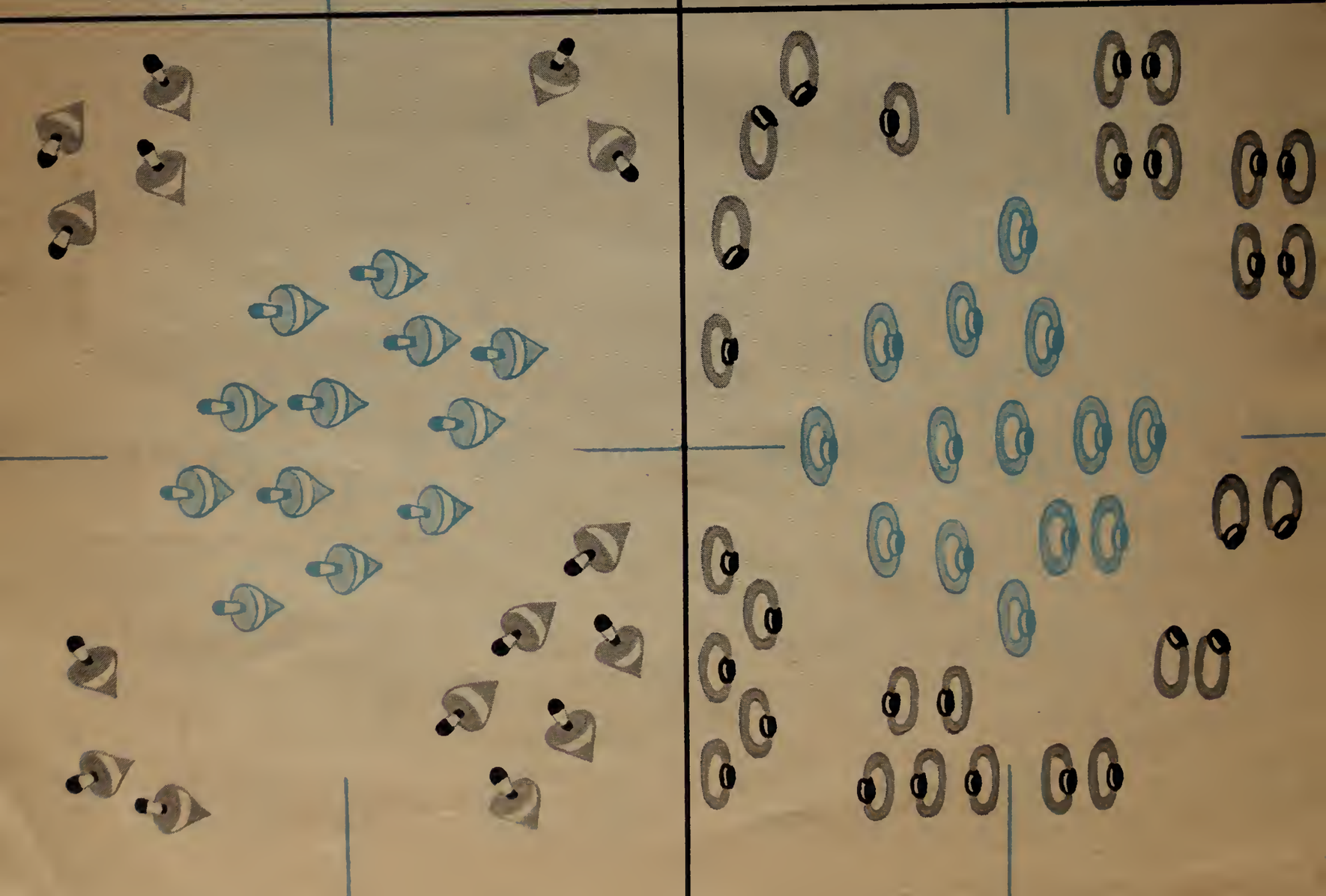
10 as 5,5; 2,2,2,2,2; 4,4,2 (Page 22 **Numbers We See**). Direct attention to the first picture and say: "Look at the blue group of bananas. Find a black group of bananas to put with the blue ones so that there will be ten bananas in all. Draw a circle so that it will be around the ten bananas. Be sure that all the blue ones and enough black ones are in the circle." The children are to make a group of ten objects in each picture, using the entire group of blue objects and complete groups of black objects.

10 as 5,5; 2,2,2,2,2; 4,4,2 (Page 22 **Numbers We See**). The children will use the blue strip of pictures from page 23. See the directions on page 7 for use of this strip of pictures. When each child has the blue strip in position, say: "Look at the milk bottles on the blue strip and on the white strip. Are there just ten milk bottles in all? If there are just ten milk bottles in all, put this *mark*, X, in the little blue square. If there are not just ten bottles, put this *mark*, ≋ (scribble), in the blue square." Have the children continue in the *same way* for the other pictures on this white strip and for all the pictures on the other four white strips.

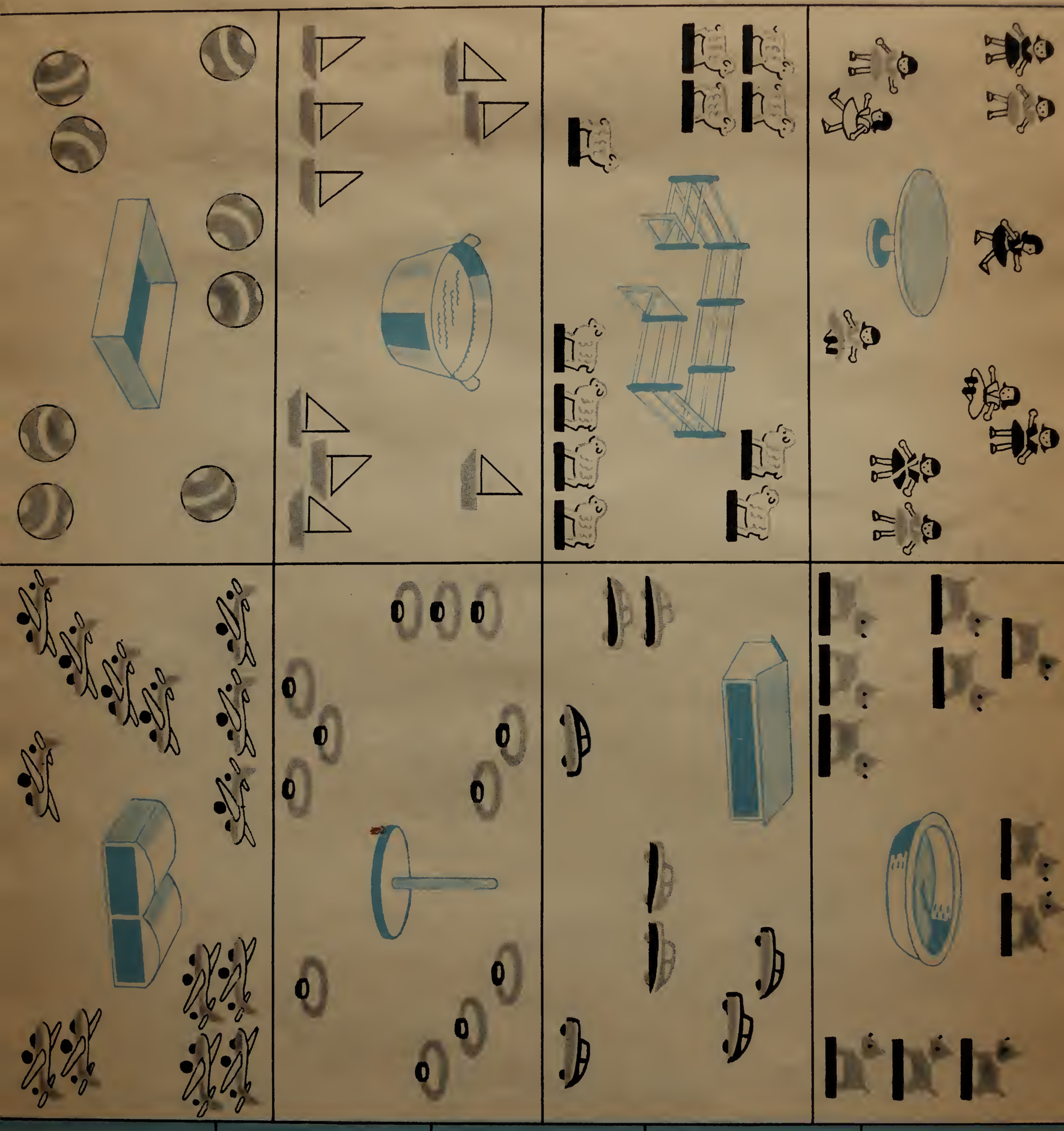


Groups of 6, 8, and 10 (Page 23 **Numbers We See**). Direct attention to the picture of the tops. Say: "Look at these tops [point to the black tops in the upper left corner]. We are going to use some of the blue tops so that we will have 6 tops in this corner. Find the blue tops that you will use. Draw a circle around these blue tops and the black tops so that you will have 6 tops in all. Now put 6 tops in each corner by drawing a circle around the black tops and some blue ones. If there are enough black tops in a corner, just draw a circle around them." Direct the children to put **8 balls, 10 rings,** and **10 blocks** in each corner.

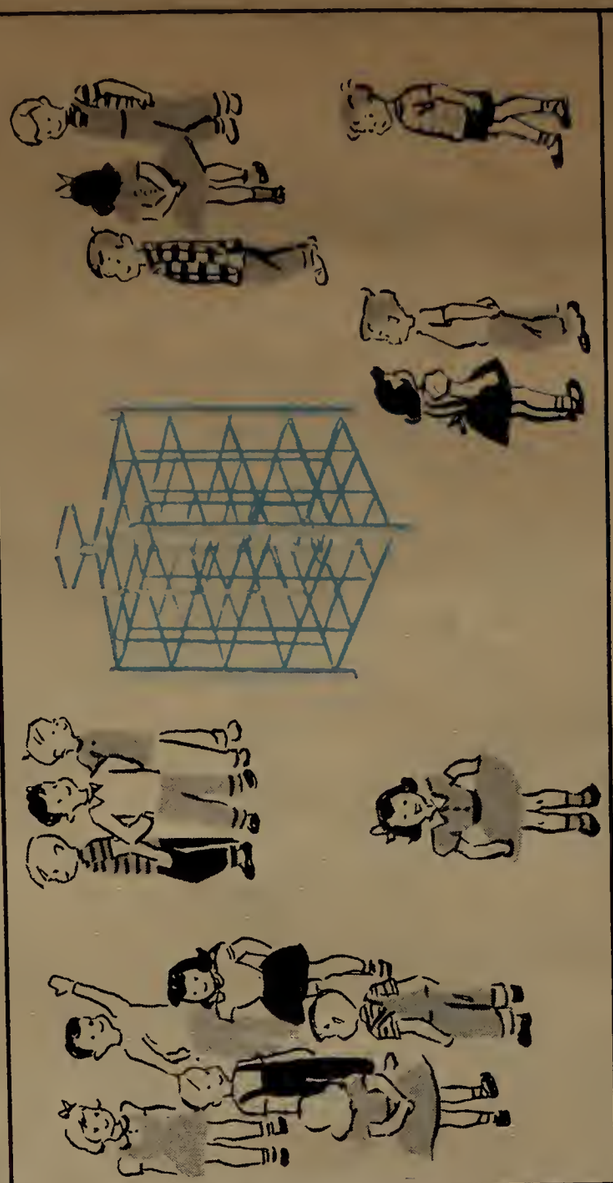


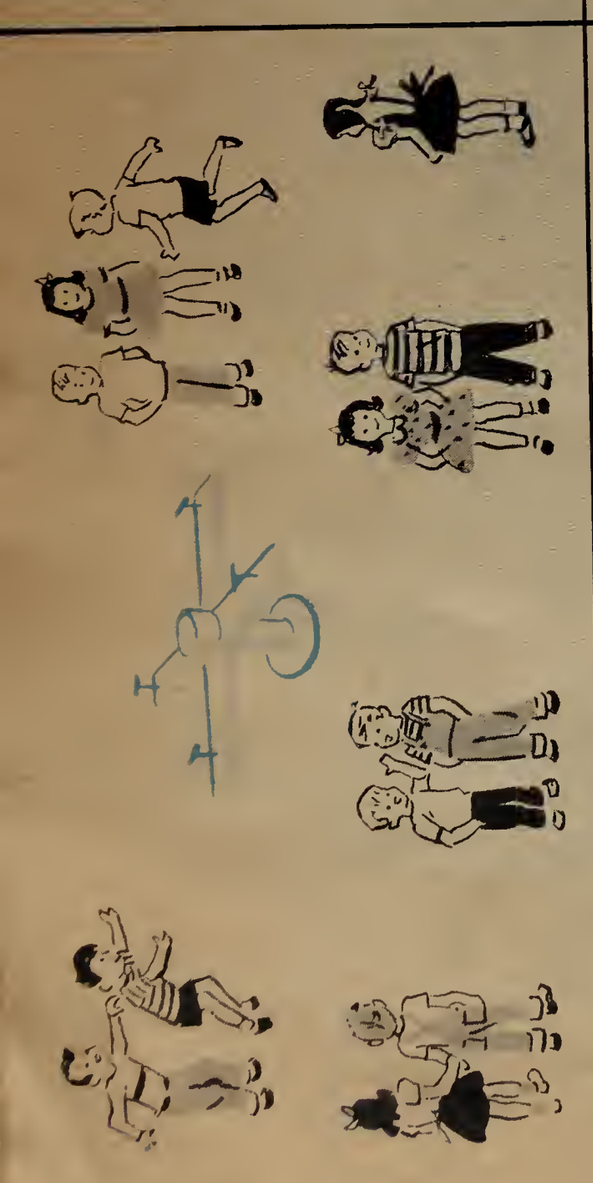


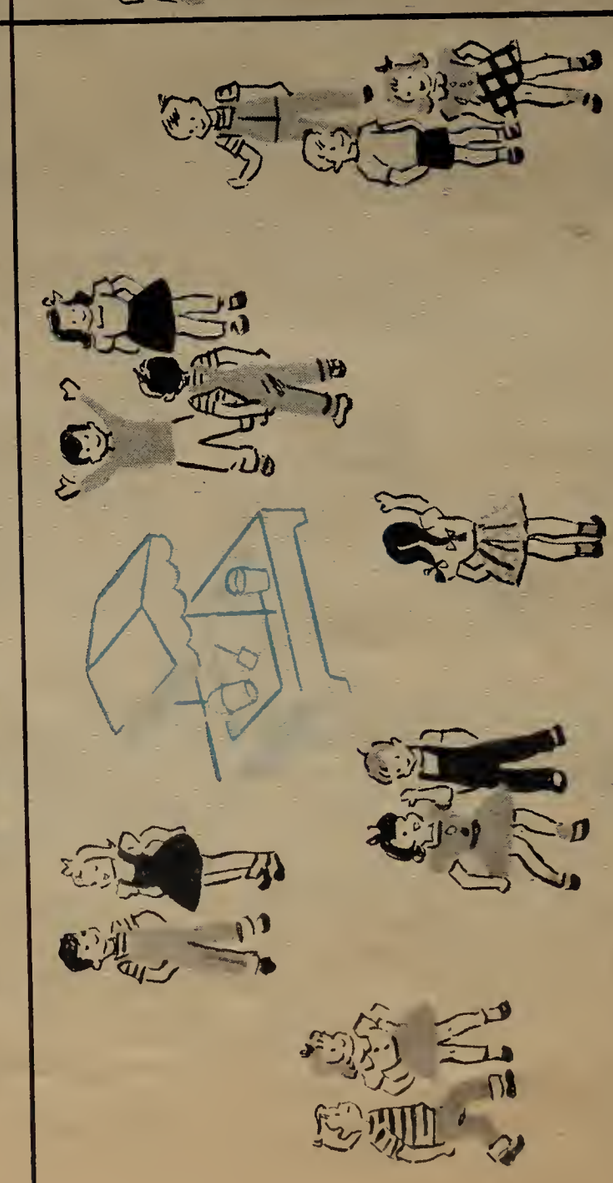
5 as 2,2,1; 3,2; 4,1 (Page 24 **Numbers We See**). Direct attenfion to the first picture ond say: "Look at the picture of the dolls. Just five of these dolls are to be at the table. Decide which dolls you want to have at the table, but do not separate those that are together. Drow circles oround the groups of dolls that are to be at the toble. You may draw a circle around one doll if it is alone. Now draw a line from each of these groups to the table." Explain that in each picture the children are to put five objects into something in the same way. Warn them not to separate groups ond tell them that the blue strip will be used later.

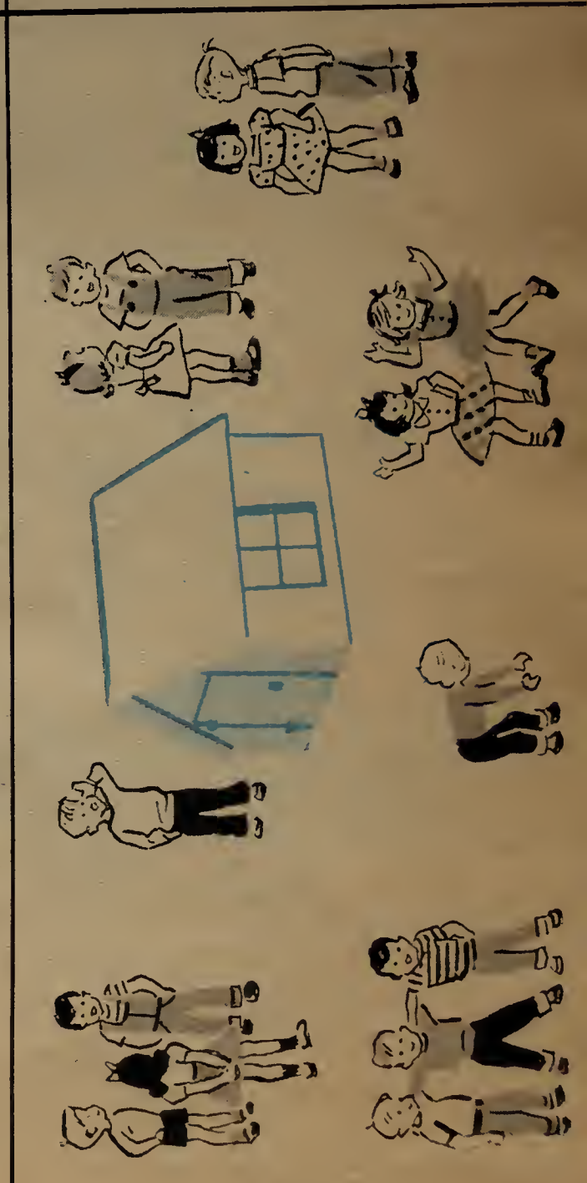


7 as 5,2; 4,3; 3,4; 2,5; 6,1; 1,6 (Page 25 **Numbers We See**). Direct attention to the first picture and say: "Look at the groups of children in this picture. Just seven of the children are to play on the merry-go-round. Decide which children you want to play on the merry-go-round, but do not separate those that are together. Draw circles around the groups of children that are to play on the merry go-round. You may drow a circle around one child if he is alone. Now draw a line from each of these groups to the merry-go-round." Explain that in each picture the children are to bring seven children into the center object.



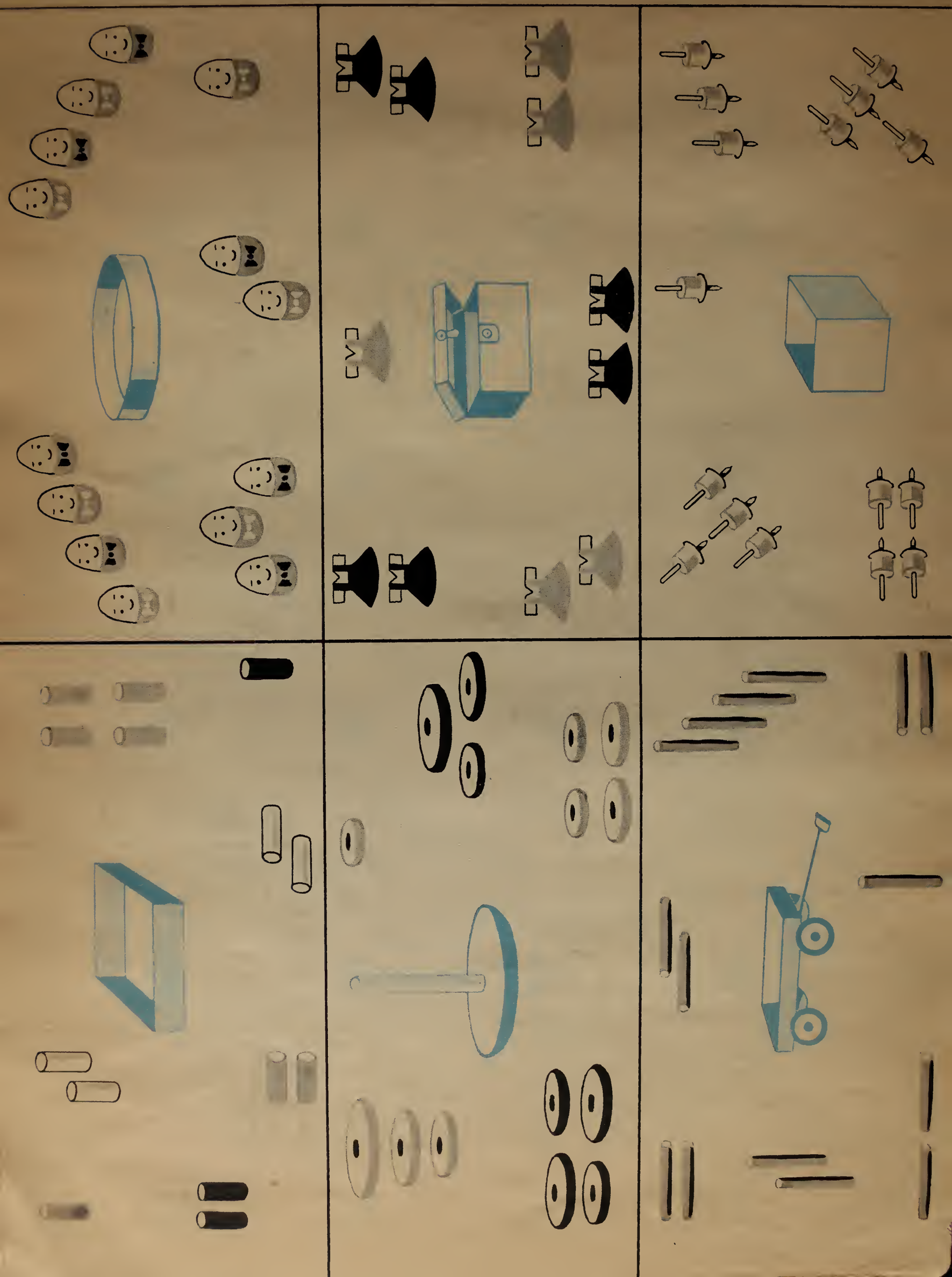




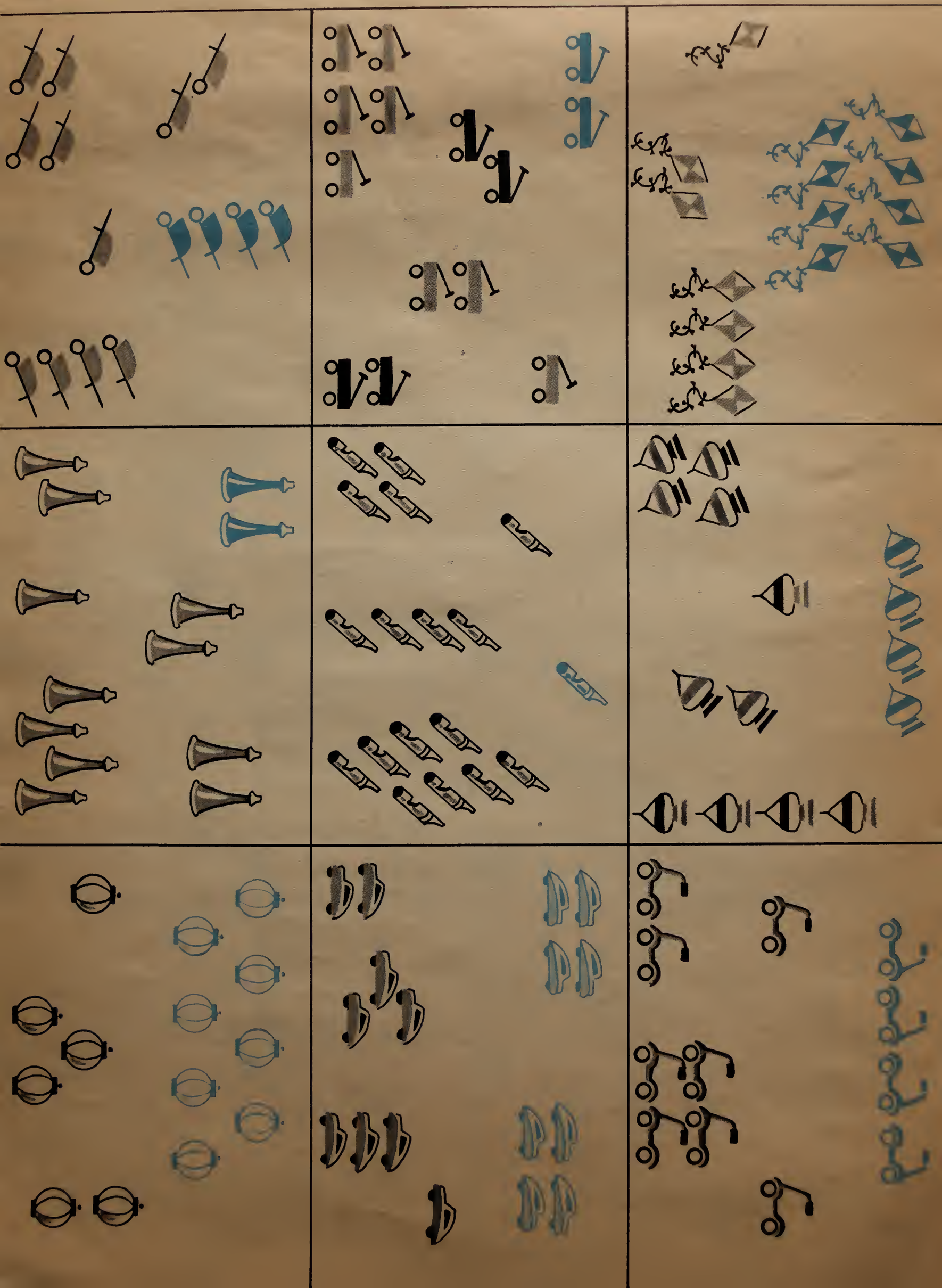


7 as 2,2,2,1; 3,3,1; 6,1 (Page 25 **Numbers We See**). The children will use the brawn strip of pictures from page 27. See the pictures on page 97 before using this strip of pictures. When each child has the brown strip in position, say: "Look at the flags on the brown strip and on the white strip. Are there just seven flags in all? If there are just seven flags in all, put this mark, ✓, in the little blue square. If there are not just seven flags, put this mark, ≈ (scribble), in the little blue square. Have the children continue in the same way for the other pictures on this strip and for all the pictures on the other four white strips. They should be able to finish the page independently.

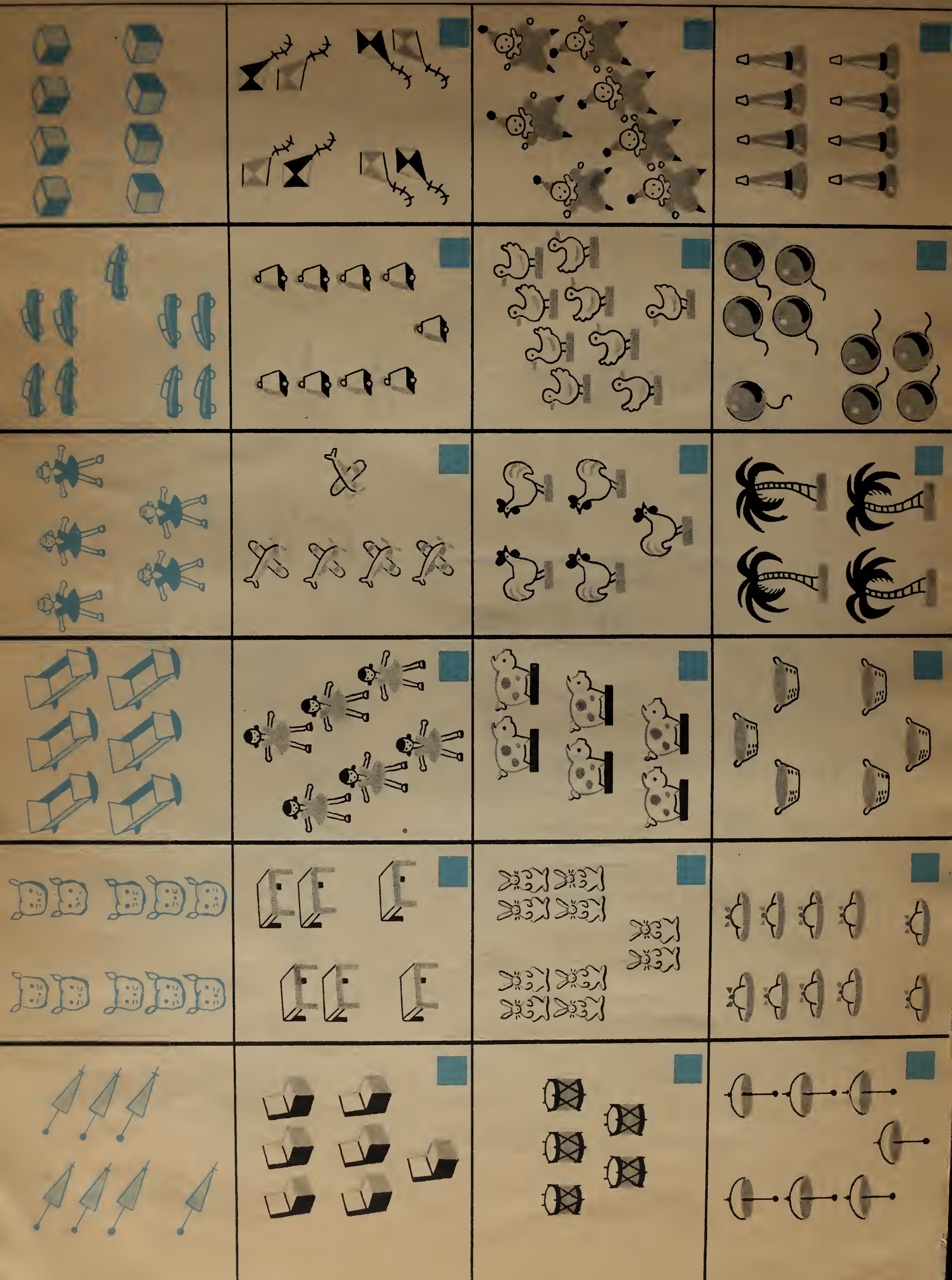
9 as 2,2,2,2,1; 4,4,1 (Page 26 **Numbers We See**). Direct attention to the first picture and say: "Look at the groups of pegs in this picture. Just nine of the pegs are to be put into the blue box. Decide which pegs you want to put in the box, but do not separate those that are together. Draw circles around the groups of pegs that are to be put into the box. You may draw a circle around one peg if it is alone. Now draw a line from each of these groups of pegs to the box." Explain that in each of the other pictures the children are to put nine toys into the center object. The children should finish the page independently.



9 as 2,2,2,2,1; 4,4,1; 8,1 (Page 26 **Numbers We See**). Direct attention to the first picture and say: "Look at the group of blue kites. Find a group of black kites to put with the blue ones so that there will be nine kites in all. Draw a circle so that it will be around the nine kites. Be sure that all the blue ones and enough black ones are in the circle." The children are to make a group of nine objects in each of the other pictures, using the entire group of blue objects and complete groups of black objects.

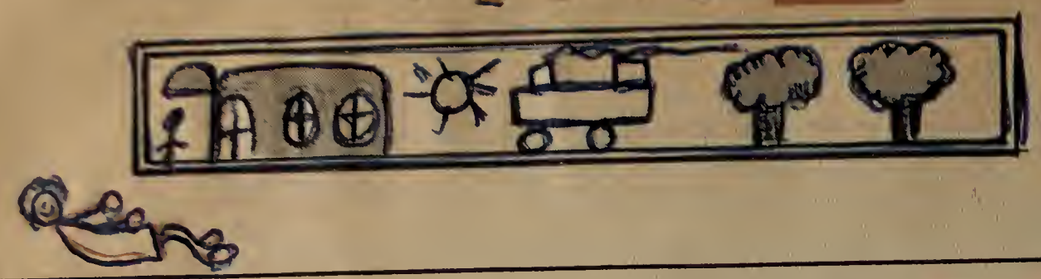


Recognition of Groups of 5, 6, 7, 8, 9, and 10 (Page 27 **Numbers We See**). Direct attention to the first picture and say: "Look at the picture of the blue umbrellas. How many blue umbrellas are in the picture? Look at each picture in the row of pictures under the blue umbrellas [point to the first vertical row of pictures]. If there are just as many objects in a picture as there are blue umbrellas, put this mark, X, in the blue square. If there are not just as many objects, put this mark, ≋ (scribble), in the blue square." Direct the children to work independently in this same way with the pictures in each of the other five rows.



The Unit in Measurement (Page 28 **Numbers We See**). Give each child a 2-inch stick (or piece of cardboard). Let the children discover the brown doll in each picture. Then say: "When the doll is lying down, you are to find out how long the toy is. When she is standing up, you are to find out how tall the toy is. If the toy in the first picture is longer than your stick, put this mark, ●, in the brown square. If the toy is shorter than your stick, put this mark, O, in the square. If it is just as long as your stick, put this mark, —, in the square." The children should work independently with the other pictures on the page.

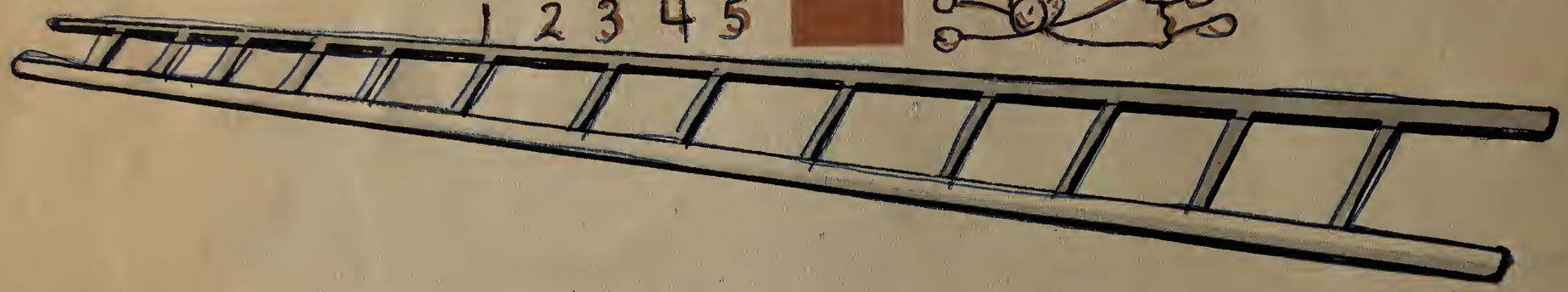
1 2 3 4 5



1 2 3 4 5

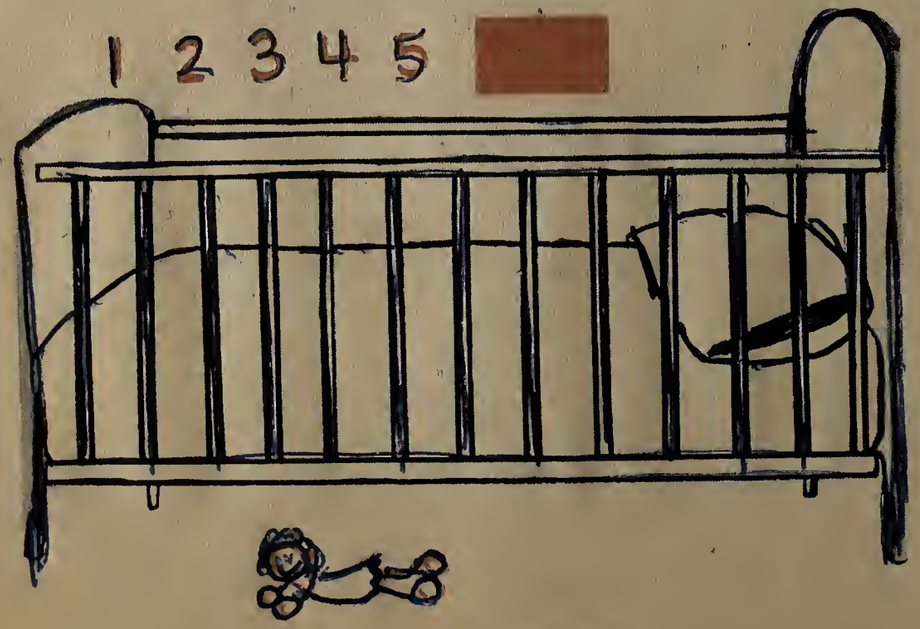
1 2 3 4 5

1 2 3 4 5



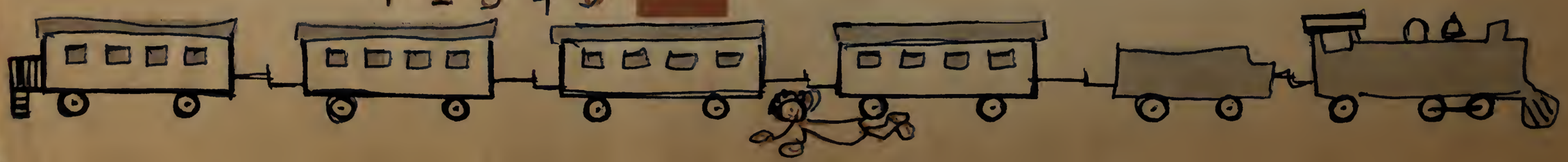
1 2 3 4 5

1 2 3 4 5



1 2 3 4 5

1 2 3 4 5



The Unit in Measurement (Page 29 Numbers We See). Give each child two 2-inch sticks. Say: "The brown doll means the same as the doll on the last page. You need more sticks this time because you are to find out how long or how tall each toy is. If a toy is longer or taller than one stick, put another stick at the end of the first stick. Put the sticks close together so they will look like one long stick. For same toys you may need all of your sticks. Each time you put down a stick, put this mark, I, in the brown answer box. Then for each picture count the marks you made and draw a circle around the number that tells how many sticks you used."

The Unit in Measurement (Page 30 **Numbers We See**). Give each child one 2-inch stick. Say: "What is the girl doing in the first picture? Let's find out how far she should throw the ring to put it around the peg. Put your stick along the brown line. Begin with the line at the girl's toe. Make a mark with your pencil at the end of the stick. Now pick up the stick and put it down again so that one end of the stick is touching the mark you made. Make another mark at the other end of the stick. Keep doing this until you come to the end of the brown line. Count the number of times you put the stick down and draw a circle around the number that tells how many times."

The Unit in Measurement (Page 30 **Numbers We See**). Give each child one 2-inch stick. Say "What number is beside the first picture? That number tells you to put your stick down two times on the brown line beside the picture. Put your stick on the brown line so that one end of it is touching the little line behind the picture. Make a mark at the other end of the stick. Pick up the stick and put it down again with one end touching the mark you made. Make another mark at the other end of the stick. For each picture put down your stick the correct number of times. Remember that the number beside each picture tells you how many times to put your stick down."

The Unit in Measurement (Page 31 **Numbers We See**). Each child will need one 2-inch stick. Direct attention to the top picture and say: "We are going to find out how far the little bird flew from its house. Put your measuring stick on the brown line so that one end touches the little mark at the beginning of the line, and make a mark at the other end of the stick. Pick up the stick and put it down again so that one end touches the mark you made, and make a mark at the other end. Do this until the end of the stick almost touches the little mark at the end of the line or is a little beyond it. Now draw a circle around the number (Directions continued on page 97)

Positional Meaning of 1 to 10 (Page 32 **Numbers We See**). Direct attention to the row of dogs on the boxes. Say: "Each box should have a number on it to show which is number 1, which is number 2, and so on. Be sure you know which way the numbers go. Find a box that does not have a number. Find this number in the row of brown numbers below the boxes. Put a ring around the number and draw a line from it to the box it should be on. Find other boxes that do not have numbers. Find the right numbers in the row below and draw rings around them. Draw lines from the numbers to the boxes." Direct the children to work in this way with each of the other pictures.

Positional Meaning of 1 to 10 (Page 32 **Numbers We See**). Direct attention to the row of dogs. Say: "Find the brown dog. Counting from the left [point to the left], decide what number the brown dog is. Find its number among these black numbers [point to the numbers at the left]. Draw a circle around the number. [It may be advisable with some groups of children to have them do this work for all six rows of animals before you give further directions.] Now count from this side [point to the right] and decide what number the brown dog is. Find its number among these brown numbers [point to them]. Draw a circle around its number. (Directions continued on page 97)

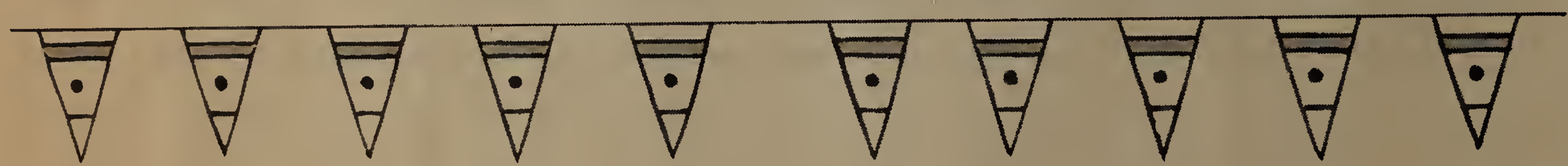
3 5 6 9

9 6 5 3

1 4 6 8

10 7 3 2

2 3 7 10



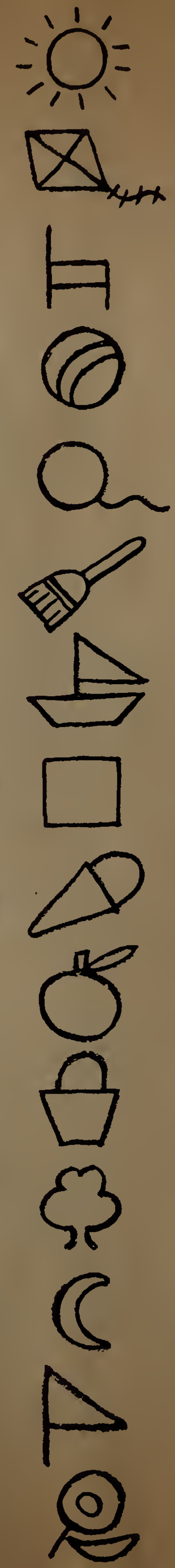
9 8 6 4

5 6 8 9

9 8 5 1

3 5 7 8

7 5 3 2

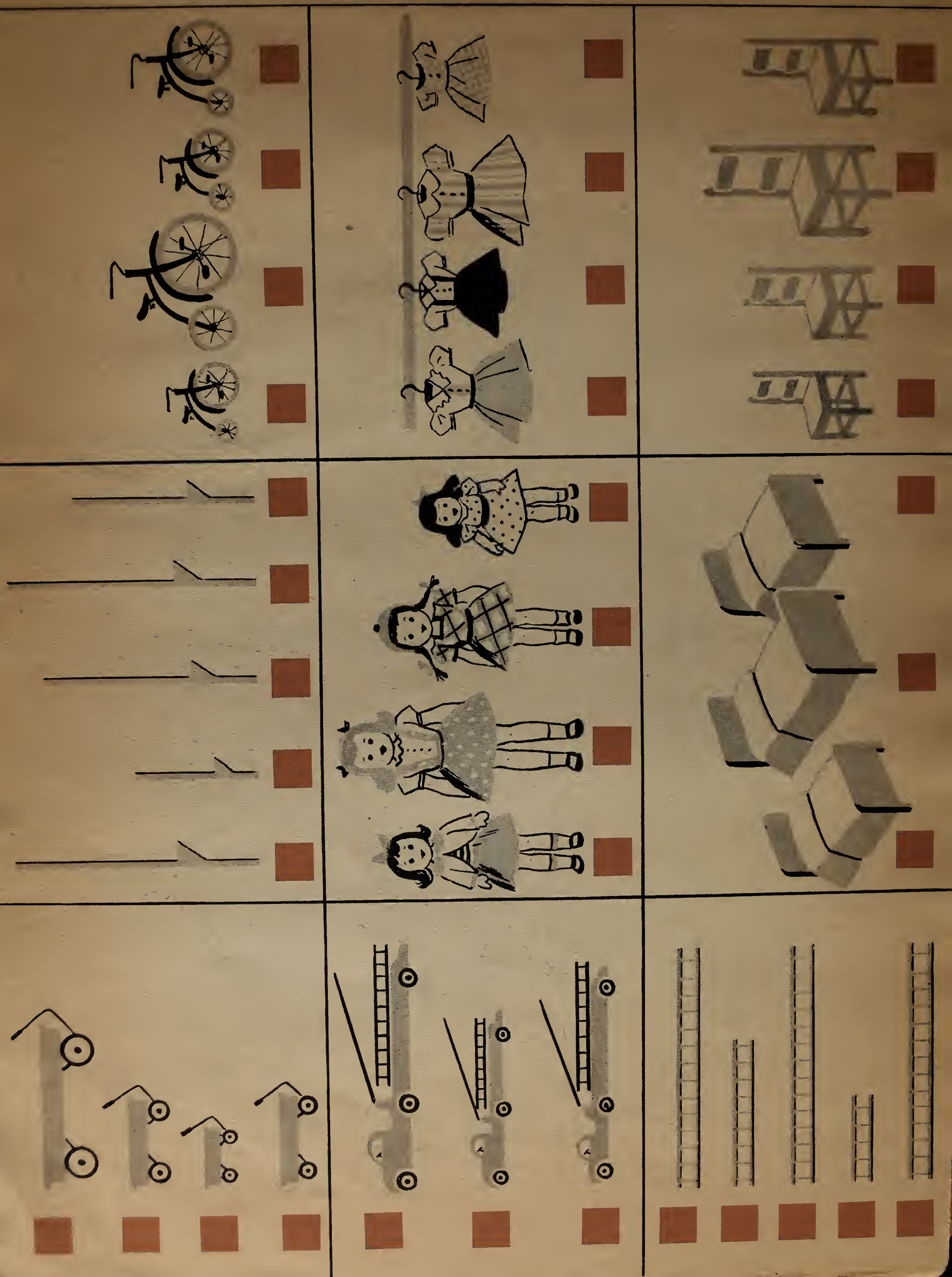


4	6	3	10
8	2	9	4
6	3	5	5
3	10	2	8
2	8	10	3
7	9	4	6
10	6	7	9
9	1	6	4
5	8	8	7
8	4	9	1
3	2	5	2
1	9	10	6
10	3	2	5
4	5	6	10
6	7	7	1

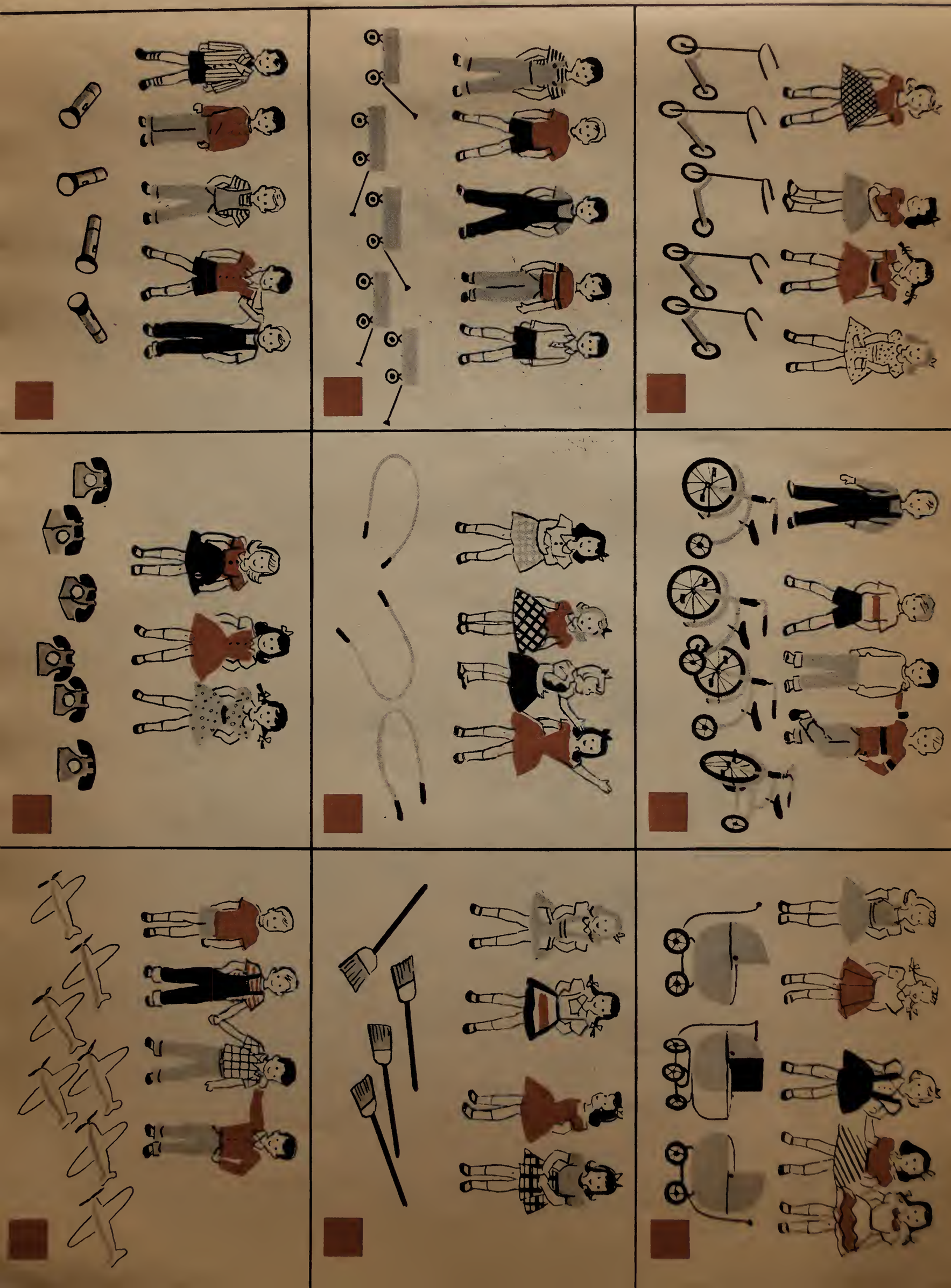
Positional Meaning of 1 to 10 (Page 32 **Numbers We See**). Explain to the children that in each strip they are to draw a line from each black number to the object that should have that number counting from the **left** and a line from each brown number to the correct object in the same row counting from the **right**. With some groups it will be possible to give full directions for the page and have the children work first with the black numbers and then with the brown numbers in each strip. With other groups it will be advisable to have them complete the work with the black numbers in all five strips, then give a second set of directions for the brown numbers.

Positional Meaning of 1 to 10 (Page 33 **Numbers We See**). Use the large pictures to help the children locate the rows and boxes from the **bottom** and the **left**—the hat is in Row 1 Box 1, the telephone is in Row 5 Box 3, etc. Then say: "Look at the block numbers and the little pictures on page 40 (point to them). The first one tells you to draw a sun in Row 4 Box 6. Find Row 4 Box 6, and draw a sun in it. The next numbers and picture tell you to find Row 8 Box 2, and draw a kite in it. Draw the other pictures in the correct boxes." Before using the row of brown numbers, help the children locate the boxes from the **top** and the **left**—(Directions continued on page 97)

Review: Concepts of Size (Page 34 **Numbers We See**). Direct attention to the picture of the wagons and say: "Are all the wagons in this picture the same size? Find the smallest wagon and put this mark, ○, in the brown square in front of it. Now find the largest wagon and put this mark, ●, in the brown square in front of that wagon. Are any of these wagons the same size? If you find any that are the same size, draw a line connecting them. In each of the other pictures you are to do the same thing. Sometimes you will find two things that are shortest, smallest, longest, or largest. When you do, be sure to put the correct mark in the square for each."



Review: One-to-One Correspondence (Page 34 **Numbers We See**). Say: "Do you think there are enough scooters in the first picture so that each little girl can have one? How can you find out? [Let the children either use markers or draw lines from the girls to the scooters to find out whether there are just enough, too many, or not enough scooters for the girls.] If there are just enough scooters for the girls, put this mark, =, in the brown square. If there are not enough, put this mark, O, in the brown square. If there are too many, put this mark, ●, in the brown square. Do the same for each of the other pictures on this page."



3 6 8 7 4 10 5 9

8 5 3 4 6 9 10 7

6 10 5 3 4 8 7 9

4 8 7 10 6 3 9 5

5 7 10 4 6 3 9 8

9 6 4 3 10 7 5 8

10 3 6 9 5 8 7 4

7 3 5 10 8 4 9 6

8 5 3 4 6 9 10 7

4 8 7 10 6 3 5 9

3 6 8 7 4 10 5 9

5 7 10 4 6 3 8 9

7 6 4 9 5 10 3 8

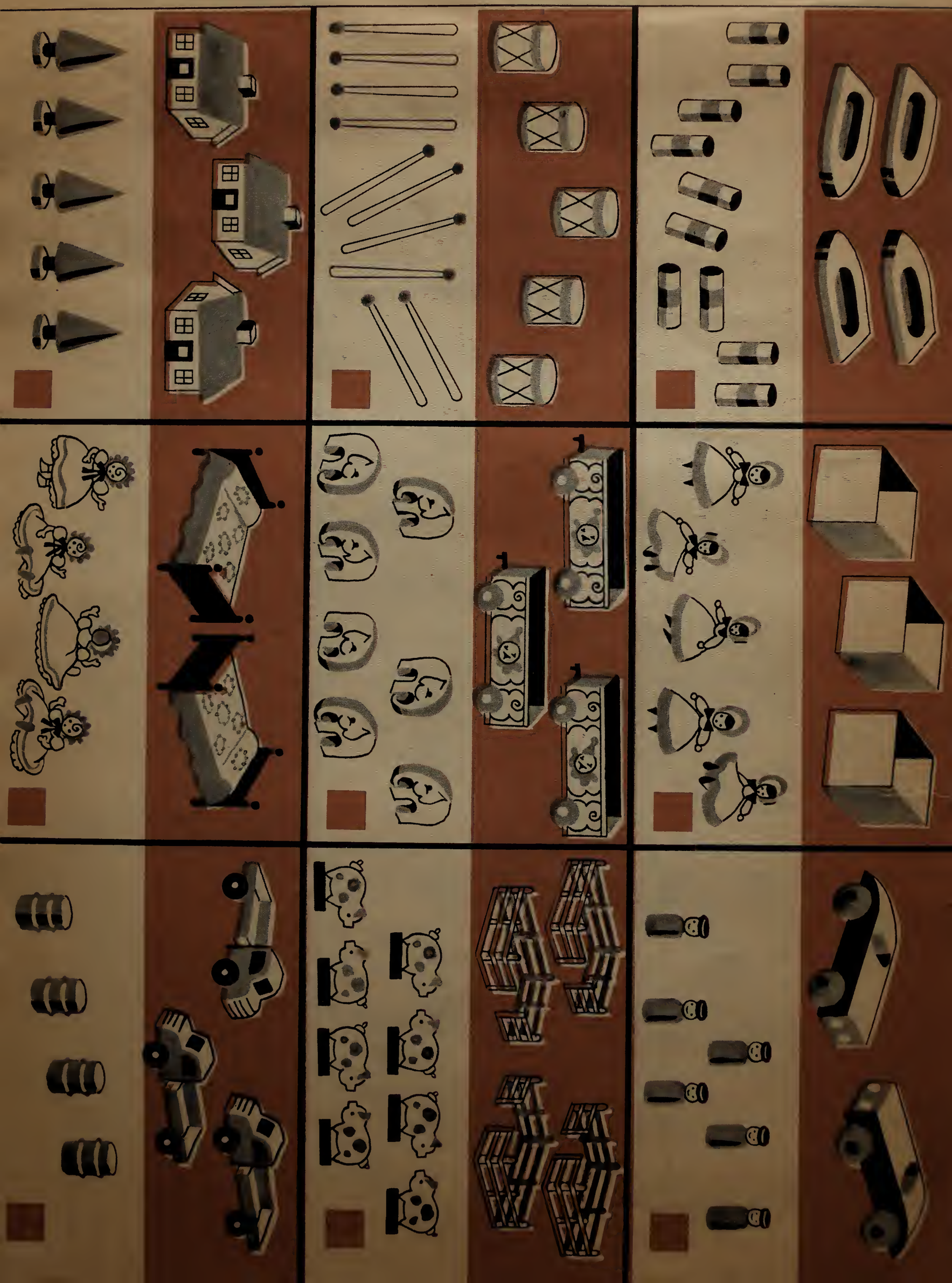
4 8 6 10 7 3 9 5

9 6 4 3 10 7 5 8

9 4 10 7 3 8 6 5

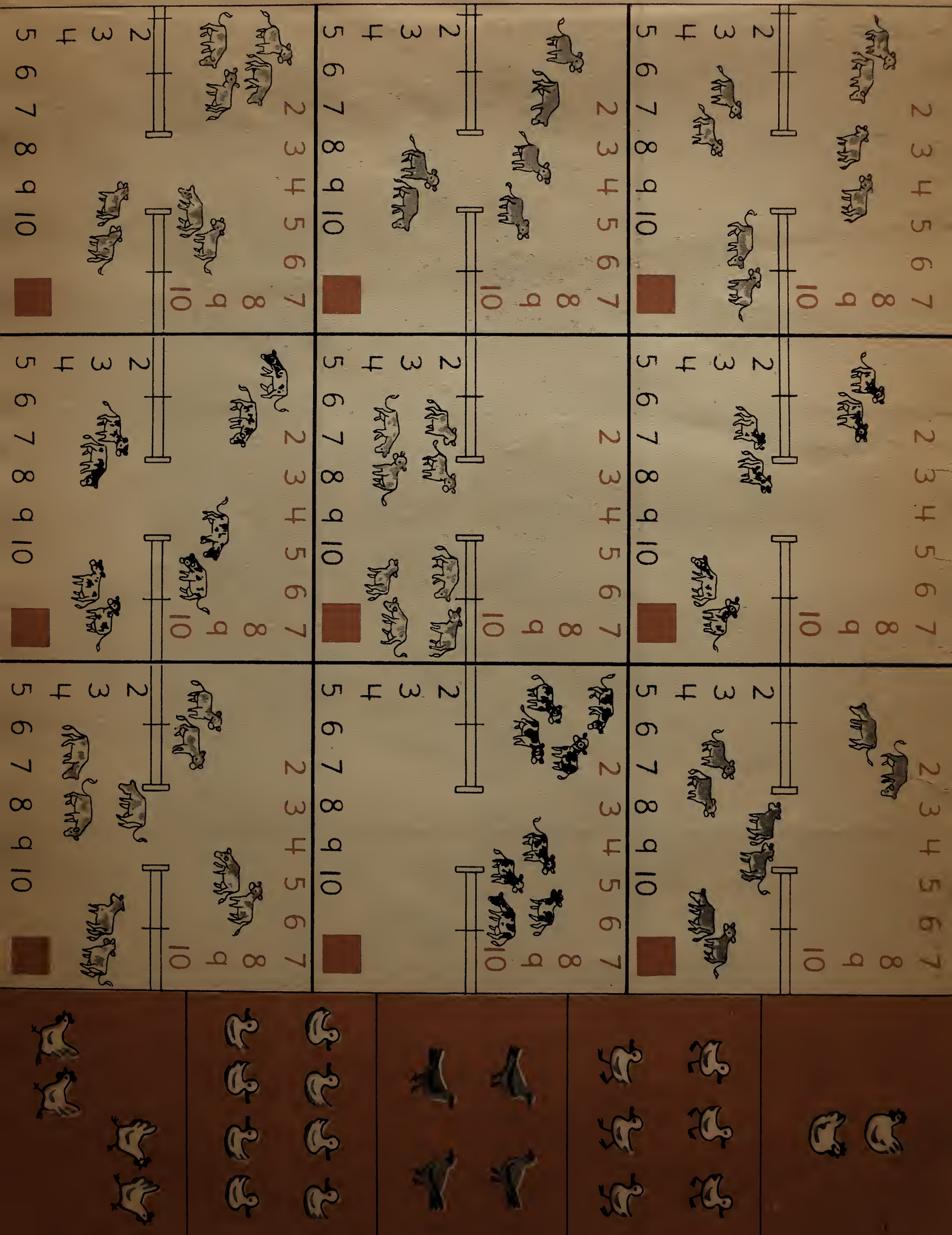
Review: Recognition of Groups of 3 to 10 (Page 34 Numbers We See) Let the children look at all the pictures on the page and then say "Look at the picture of the tops. How many tops are there? Now look at the row of green numbers under the tops. Find the number that tells how many tops there are and draw a circle around that number. Look at each of the other pictures and decide how many objects there are. Then draw a circle around the green number that tells how many objects there are in the picture."

One-to-Two Correspondence (Page 35 **Numbers We See**). Say: "Each of these boats is to have two pegs in it. We will use markers [or draw lines] to find out if there are just enough pegs, too many, or not enough to put two in each boat. [Show the children how to put a marker on each peg and then move two markers to each boat, or how to draw a line from each of two pegs to a boat.] If there are just enough pegs, put this mark, =, in the brown square. If there are too many, put this mark, ●, in the brown square. If there are not enough, use this mark, O. For each of the other pictures put two of the toys from the white strip into each container in the brown strip if you can."

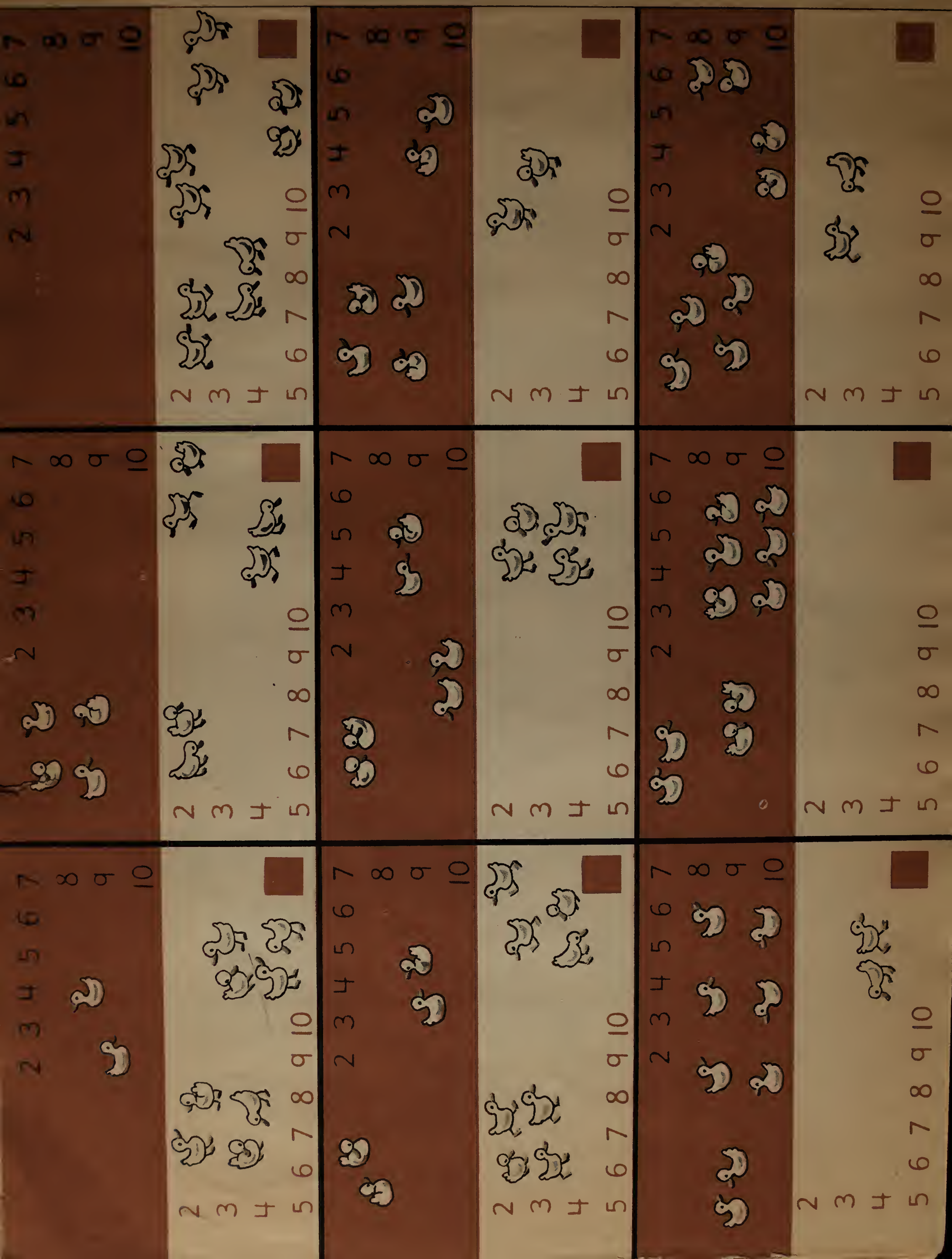


Rearranging Groups of 6 (Page 36 Numbers We See). Direct attention to the first picture and say: "How many chickens are in the brown field? Find the black number that tells how many chickens are in the field and draw a circle around it. Now look at the chickens that are not in the field [point them out]. Find the brown number that tells how many chickens are not in the field. Draw a circle around it. If there are just six chickens in all in this picture, put this mark, —, in the brown square. If there are more than six chickens in all, put this mark, ●, in the brown square. If there are fewer than six chickens, put this mark, ○, in the brown square. Do these same things for all the other pictures."

Rearranging Groups of 8 (Page 37 **Numbers We See**). The procedures for this page are like those for page 46. Tell the children to laak at the cows in the field at the tap of the picture and to encircle the brawn number that tells how many there are. Then tell them to look at the caws in the bottom field and to encircle the black number that tells how many there are. Finally direct the children to put — in the brown square if there are just 8 cows in all, to put ● in the square if there are more than 8 cows, and O in the square if there are fewer than 8 cows. Warn the children that they are not to use the pictures on the brown strip.

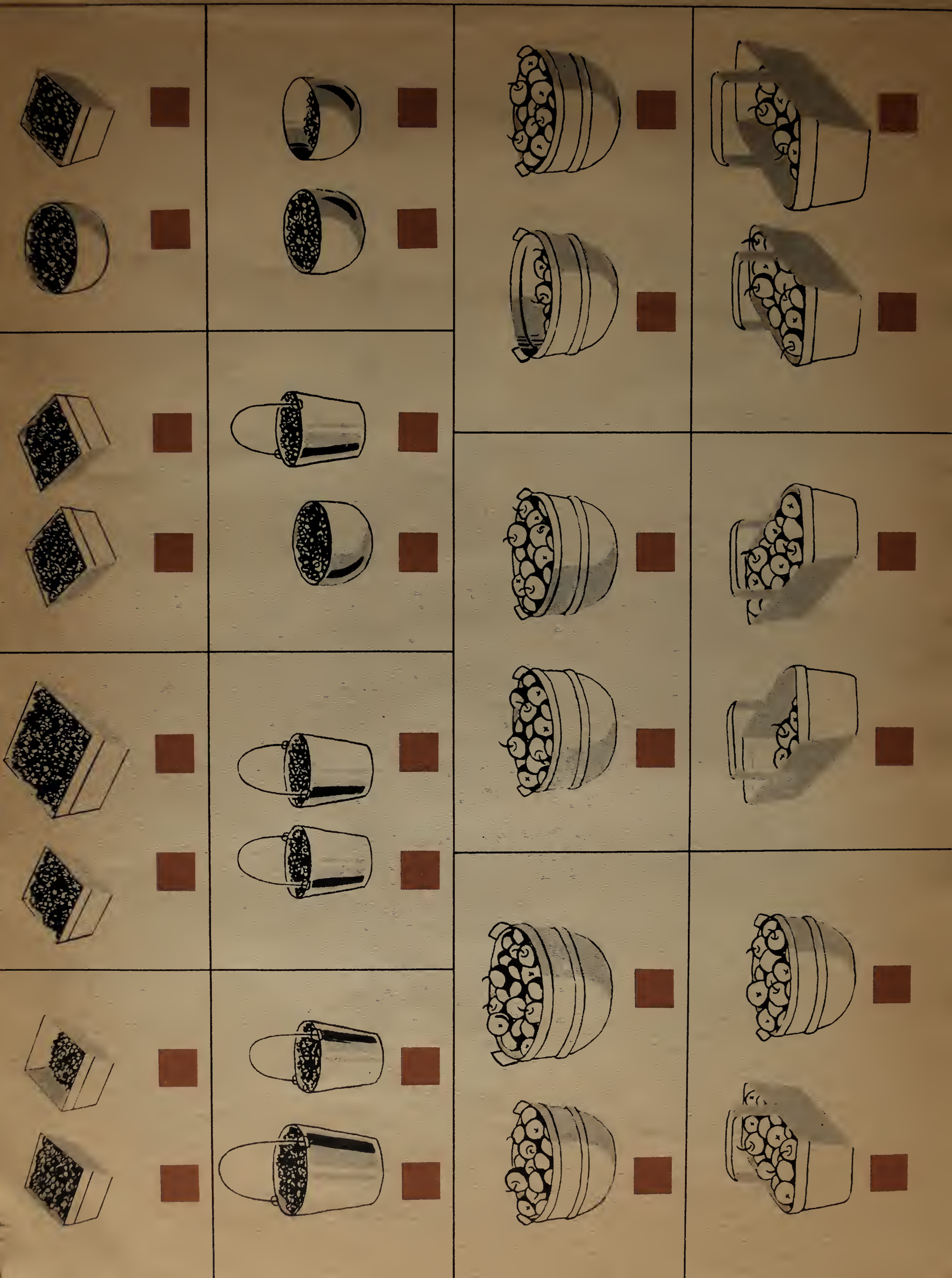


Rearranging Groups of 10 (Page 38 **Numbers We See**). The procedures are like those for pages 46 and 47. Tell the children to look at the ducks in the brown field and to encircle the black number that tells how many there are. Then have them look at the ducks that are not in the field and encircle the brown number that tells how many there are. Finally direct the children to put ▬ in the brown square if there are just 10 ducks in all, to put ● in the square if there are more than 10 ducks, and to put O in the square if there are fewer than 10 ducks.



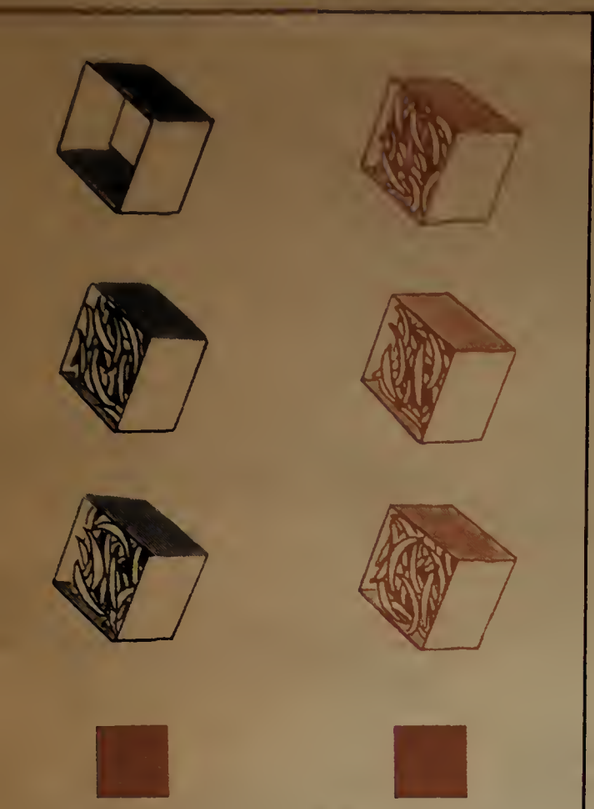
Recognition of 6, 8, and 10 (Page 39 **Numbers We See**). The children will use the brown strip from page 47 with this page. Direct the children to place the brown strip so that the edge touches the solid brown line. The pictures on page 97 show how to use the strip. Say: "Look at the sitting chickens on both the brown strip and the white strip. Decide how many sitting chickens there are all together. Drow o circle oround the number on the white strip that tells how mony there ore. Do the same for the running ducks, birds, swimming ducks, ond the running chickens." The children are to continue in this way for the other four positions of the brown strip.

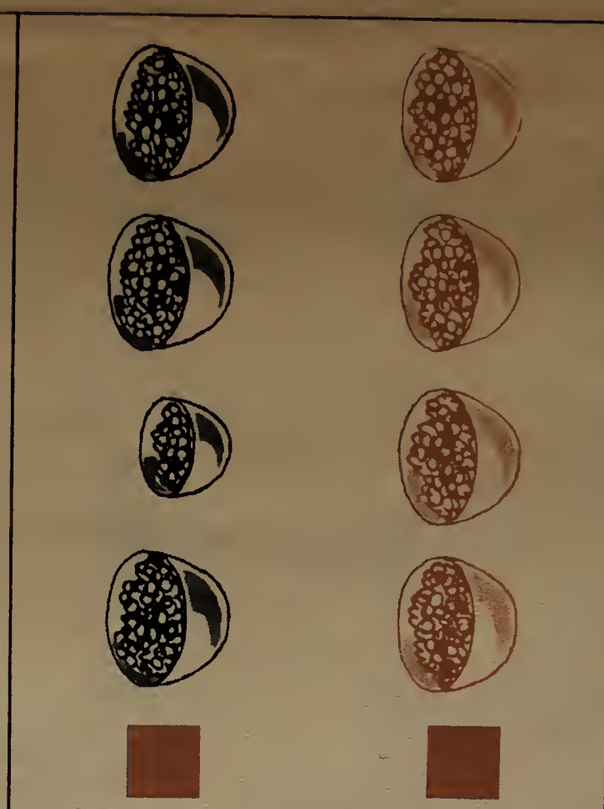
Measurement of Capacity (Page 40 **Numbers We See**) Say: "Look at the first picture. Are the two boxes the same size? Does one box have more berries in it than the other? How do you know? If one box has more berries in it than the other, put this mark, ●, in the brown square under the box that has more berries in it, and this mark, O, under the box that has fewer berries in it. If the two boxes have the same amounts of berries in them, put this mark, =, in each of the brown squares. If you can't tell which box has more berries in it, put this mark, ≷ (scribble), in each of the brown squares. Do the same for each of the other pictures.

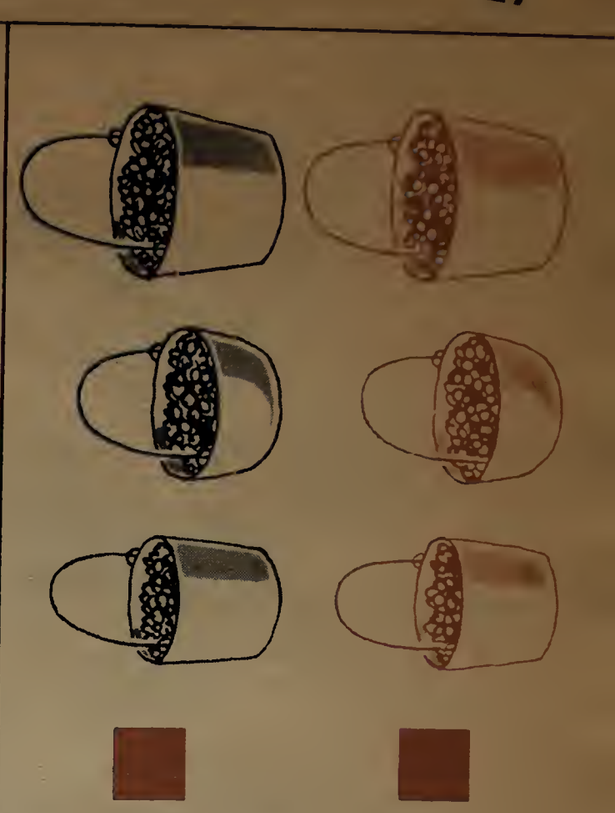


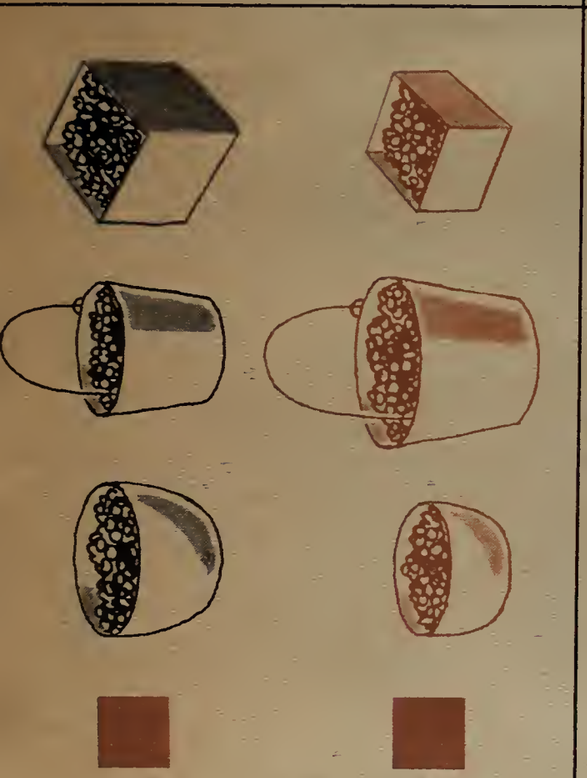
Measurement of Capacity (Page 40 **Numbers We See**). Say: "Look at the first picture. Are all the boxes the same size? Do all the boxes have the same amount of berries in them? [Be sure the children understand that they must look at the number of boxes, the quantity of berries in each, and the size and shape of the boxes.] Which row has more berries in it? Put this mark, ●, in the brown square in front of that row, and this mark, ○, in the square in front of the row with fewer berries. Now look at each of the other pictures and show which group of boxes or bowls has the larger amount of berries and which the smaller in the same way. (Directions continued on page 97)

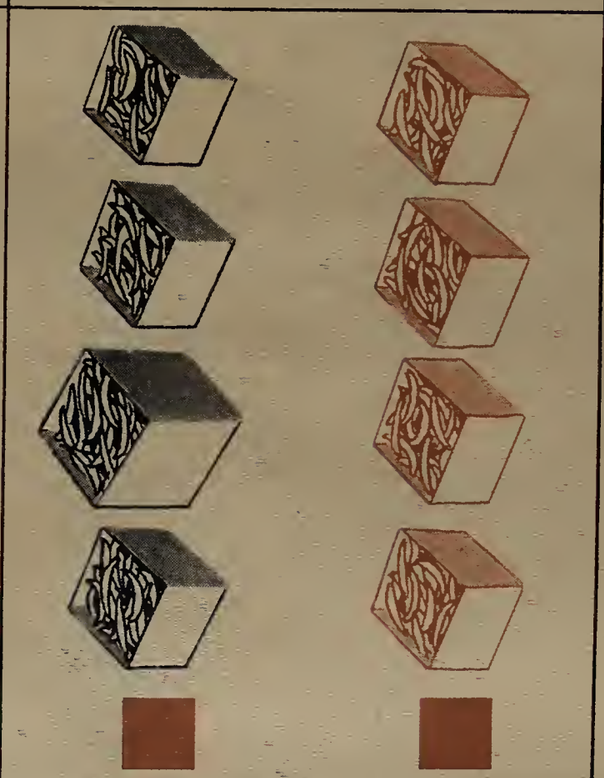
Measurement of Capacity (Page 41 **Numbers We See**). Give the children directions like those for page 51. They are to use the same symbols to indicate their responses— ● for the group of containers that holds the larger amount of berries, O for the group of containers that holds the lesser amount, = when both groups hold equal amounts, and ≷ (scribble), when a decision cannot be made. Encourage the children to discuss their decisions wher. they are through.

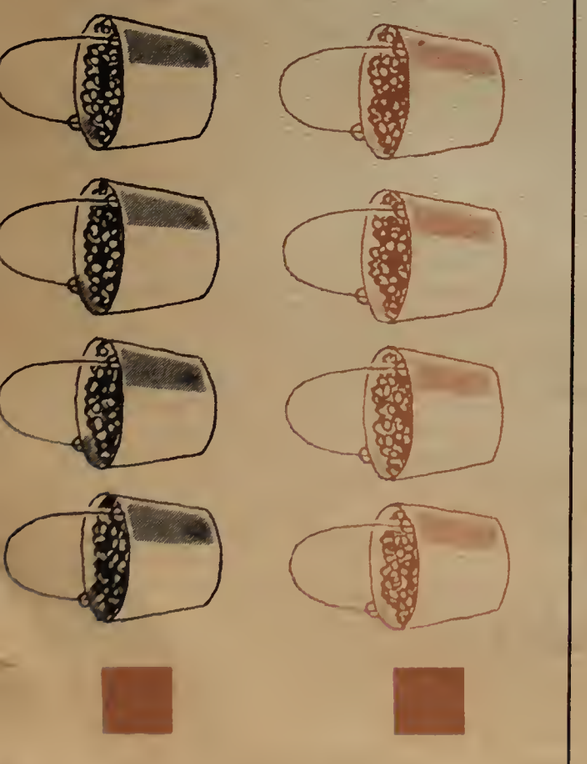


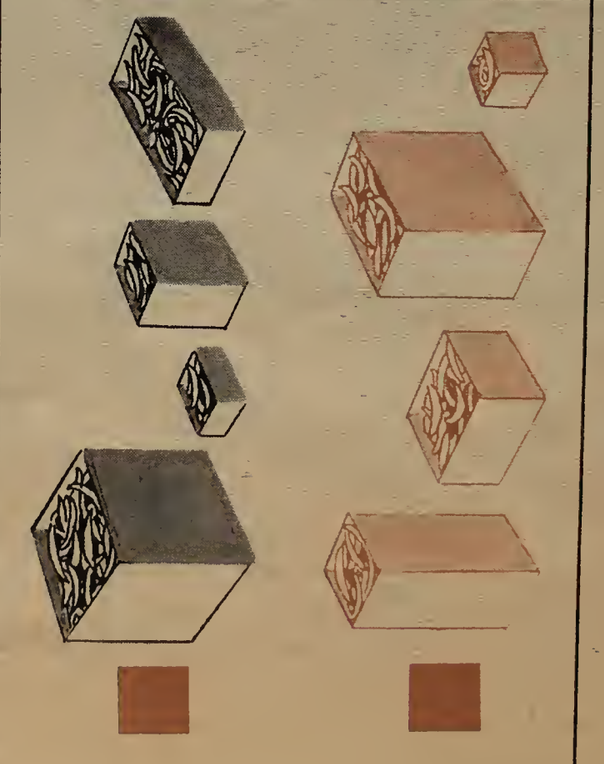


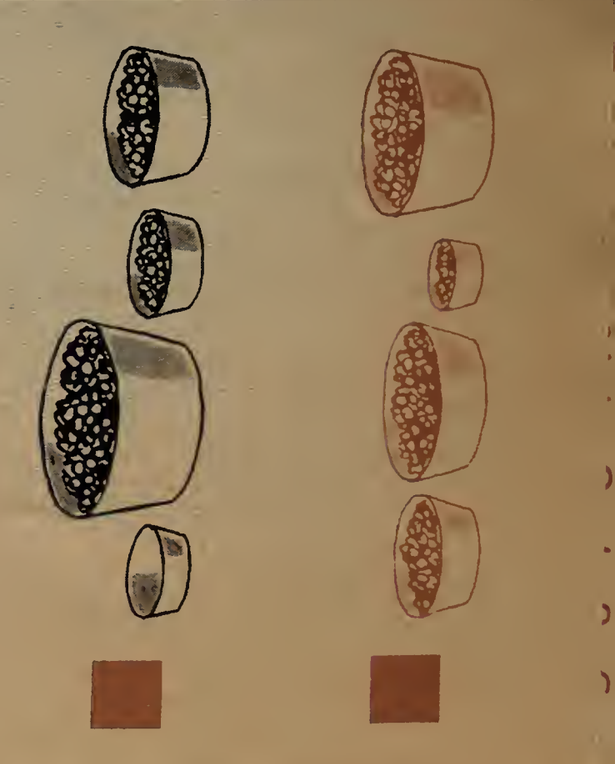






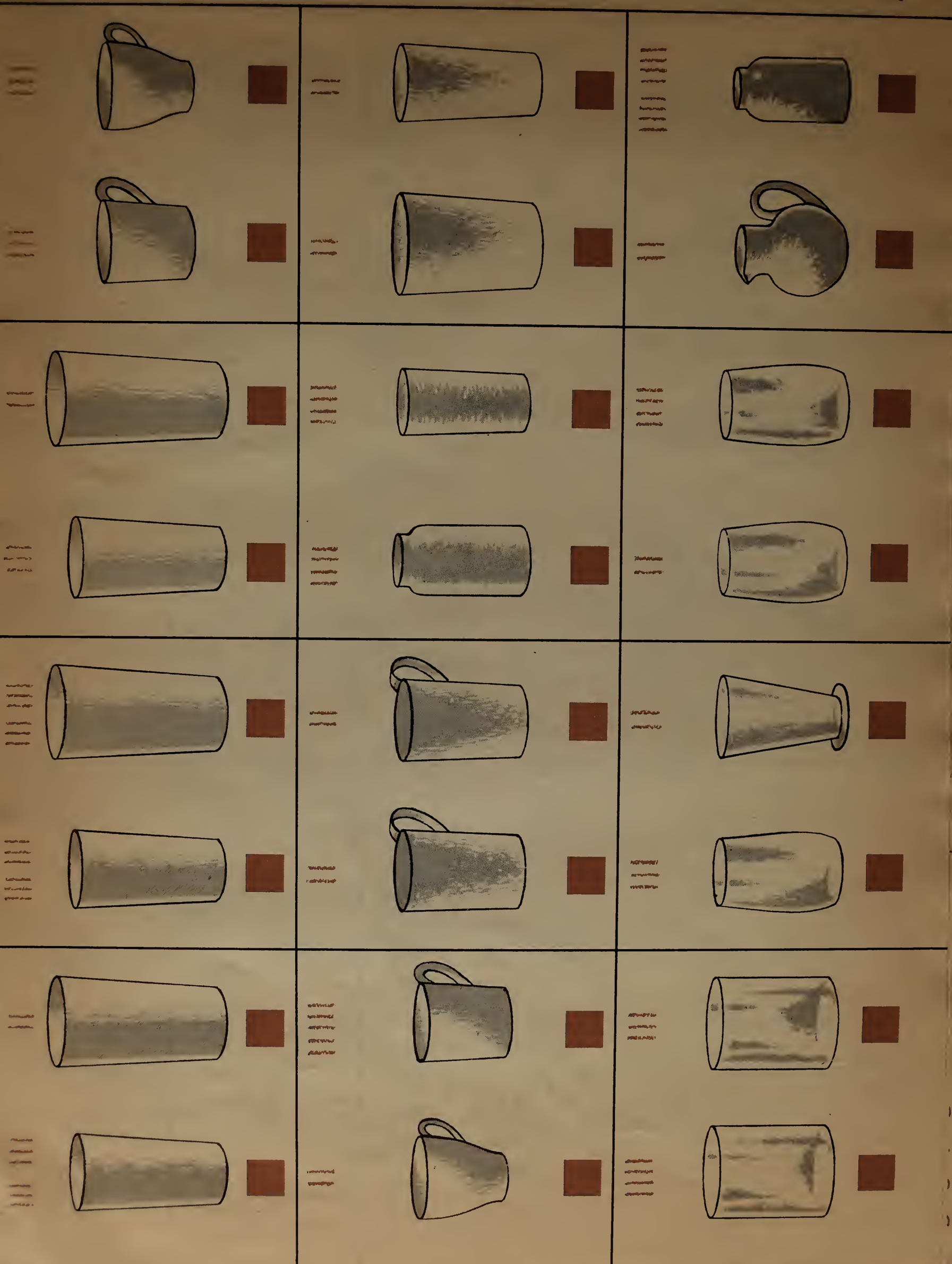






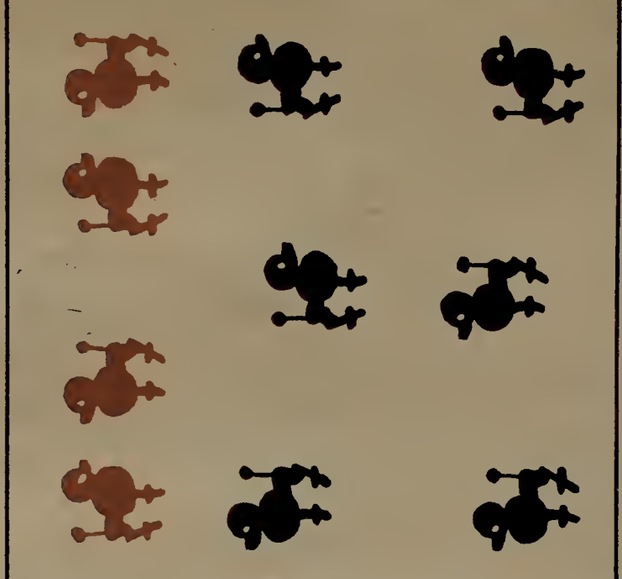
Measurement of Capacity (Page 41 **Numbers We See**). Direct attention to the first glass and the brown marks above it in the first picture and say: "Pretend that you are going to fill this glass with water three times and pour the water into a large pail. You will fill it three times because there are three brown marks above it. Now look at the other glass. How many times are you to fill it? Pretend that you fill it three times and pour the water into the pail. From which glass did you pour more water? Put this mark, ●, in the little brown square under that glass, and this mark, O, under the glass from which less water was poured. (Directions continued on page 97)

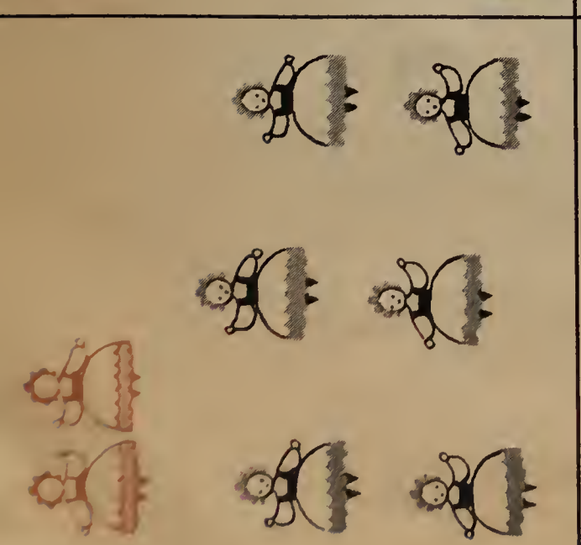
Measurements of Capacity (Page 41 **Numbers We See**). Give the children directions like those for page 53. They are to use the same symbols to indicate responses— ● for the container from which they will pour the larger amount of water, O for the container from which they will pour the smaller amount, = when they will pour the same amounts from both containers, and ≋ (scribble) when they cannot make a decision. Encourage discussion about their decisions when they are through.

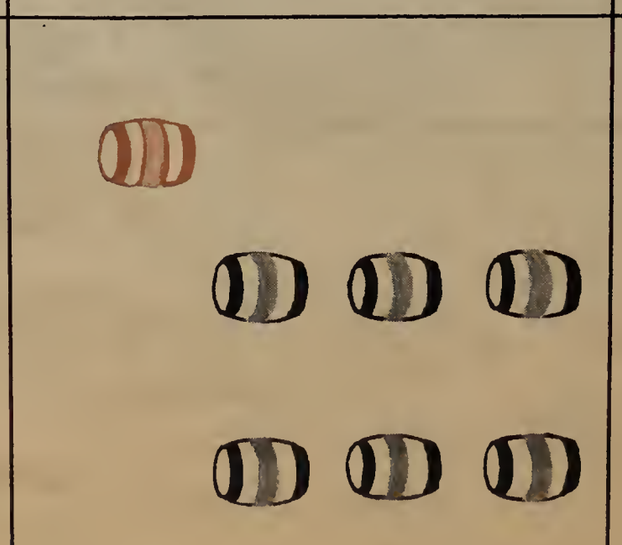


Component Groups of 6 (Pages 42-43 **Numbers We See**). The pictures on the brown strip from page 53 will be used with this page. Direct the children to place the brown strip of pictures from poge 53 so that it touches the solid brown line on page 55. See pictures on page 97. Say: "Look at the clown hats on both the brown strip and the white strip. If there are just six clown hats in all, put this mark, ✓ in the brown square on the white strip. If there are not six clown hats in all, put this mark, ≋ (scribble), in the brown square. Do the same for all the other pictures on this strip." Direct the children to work in the same way for the other four positions of the brown strip.

Component Groups of 6 (Pages 42-43 **Numbers We See**). Have the children look at the dolls in the first picture. Say: "In this picture we are going to draw a circle around just six of these dolls. You must use all of the green dolls and enough of the other dolls to make six in all. Do the same with all the other pictures. In each picture be sure to draw your circle around all of the green toys and enough of the other toys to have six in all." Let the children complete the work on this page independently.







Component Groups of 6 (Pages 42-43 **Numbers We See**). Adapt the directions for page 23 to this page. Direct attention to the brown key pictures. Get the children to observe that there are six toys in each picture and that each shows a different pair of groups. Tell them to look at the brown balls and then to look at each of the other pictures of balls and put this mark, ✓, in the brown square in the corner of the picture if the balls in it are arranged in a group of four and a group of two, and this mark ≋ (scribble) in the square if they are arranged in any other groups. They are to match the key pictures in the other strips in the same way.

Component Groups of 7 (Pages 44-45 **Numbers We See**). Have the children look at the rabbits in the first picture. Say: "In this picture draw a circle around just seven rabbits. Use all of the group of brown rabbits and enough of the other rabbits so there will be seven in all. Do the same with each of the other pictures on this page. In each picture be sure to draw the circle around all the brown animals and enough of the others so that there will be seven in all." Let the children complete the work on this page independently.

Component Groups of 7 (Pages 44-45 **Numbers We See**). The brown strip on page 57 is to be used here. Have the children place it so that its edge touches the solid brown line on poge 59. See the pictures on page 97. Say: "Look ot the robbits in the two pictures. If there are just seven rabbits in oll, put this mark, X, in the little brown squore. If there are not seven rabbits, put this mark, ≈ (scribble), in the brown square. Now look at the pictures of the dogs and decide whether or not there ore just seven in all. Put the correct mark in the brown square. Direct the children to continue in this way for the rest of this strip and also for the other four positions of the brown strip.

Equivalent Groups of 7 (Pages 44-45 **Numbers We See**). Adapt the directions for page 23 to this page. Direct attention to the brown key pictures. Get the children to observe that there are seven toys in each picture and that each shows a different pair of groups. Tell them to look at the brown boats and then to look at each of the other pictures of boats and put this mark, X, in the brown square in the corner of the picture if the boats in it are arranged in a group of three and a group of four, and this mark, ≷ (scribble), in the square if they are arranged in any other groups. They are to match the key pictures in the other strips in the same way.

Recognition of Groups of 3 to 7 (Page 46 **Numbers We See**). Direct the children to look at the first picture of the clowns. Say: "How many clowns are in this picture? Now look at the brown numbers under the clowns. Find the number that tells how many clowns there are in the picture and draw a circle around that number. Look at each of the pictures and draw a circle around the number that tells how many toys there are in that picture." The children should be able to work independently.

Recognition of 9 as 3, 3, 3 (Page 47 **Numbers We See**). Say: "Look at the triangles in the first picture. Draw circles around as many groups of three as you can. If there are just nine triangles, how many groups of three will you have? If there are just nine triangles, put this mark, X, in the little brown square. If there are not just nine triangles in the picture, put this mark, ≋ (scribble), in the brown square. In each of the other pictures, draw circles around as many groups of three as you can. Then put the correct mark in each brown square."

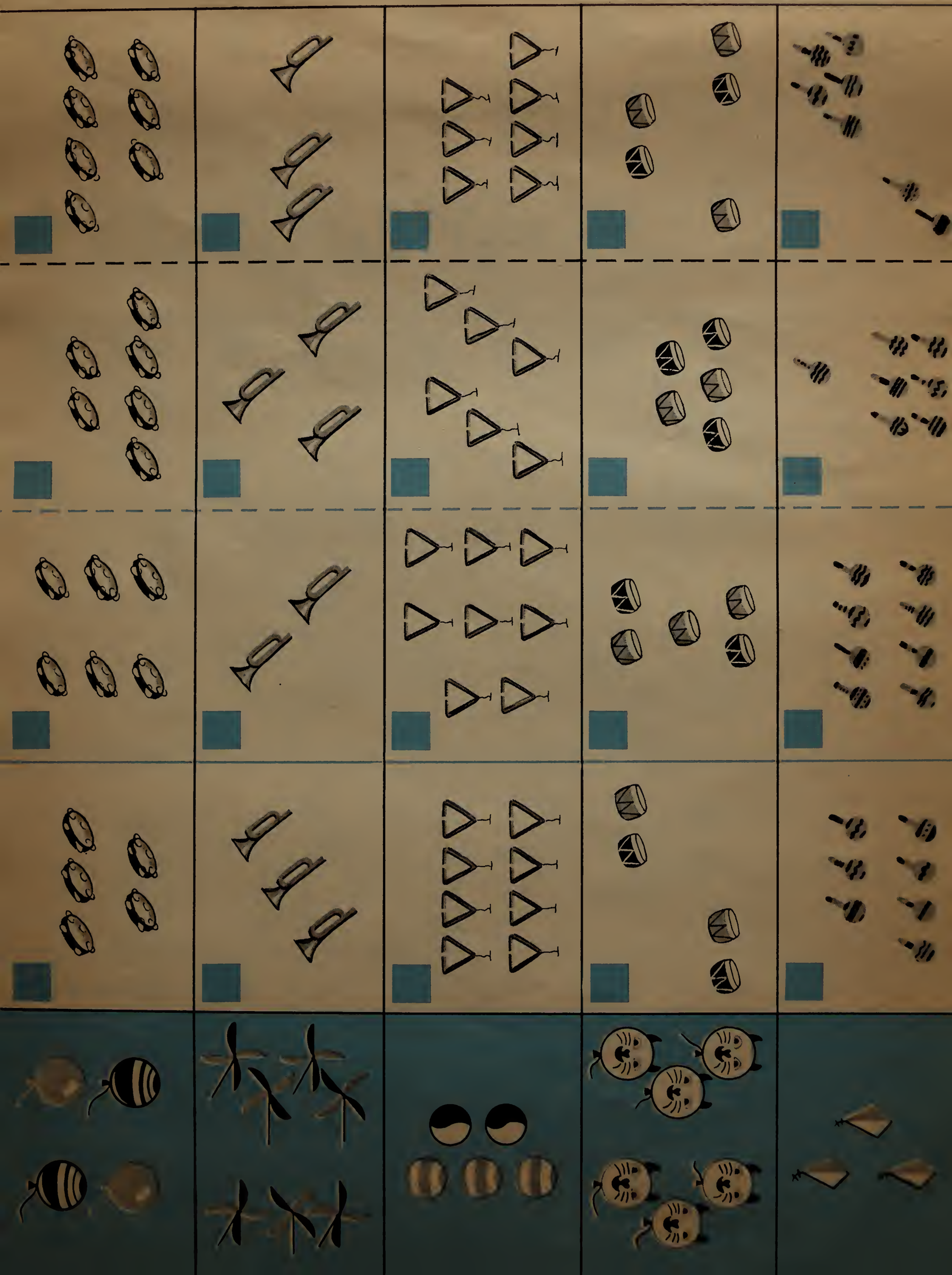
Component Groups of 8 (Pages 48-49 **Numbers We See**). Say: "Look at the picture of the ball bats. You are to draw a circle around just eight of these ball bats. Use all of the brown ball bats and enough of the black ones to make eight. When you have drawn your circle, you should have eight ball bats in it. All of the brown ones and some of the black ones will be in the circle. In each picture on this page you are to draw a circle around eight toys. Be sure to use all of the brown toys each time." The children should be able to complete the work on this page independently. Tell them that they will use the pictures on the brown strip on another day.

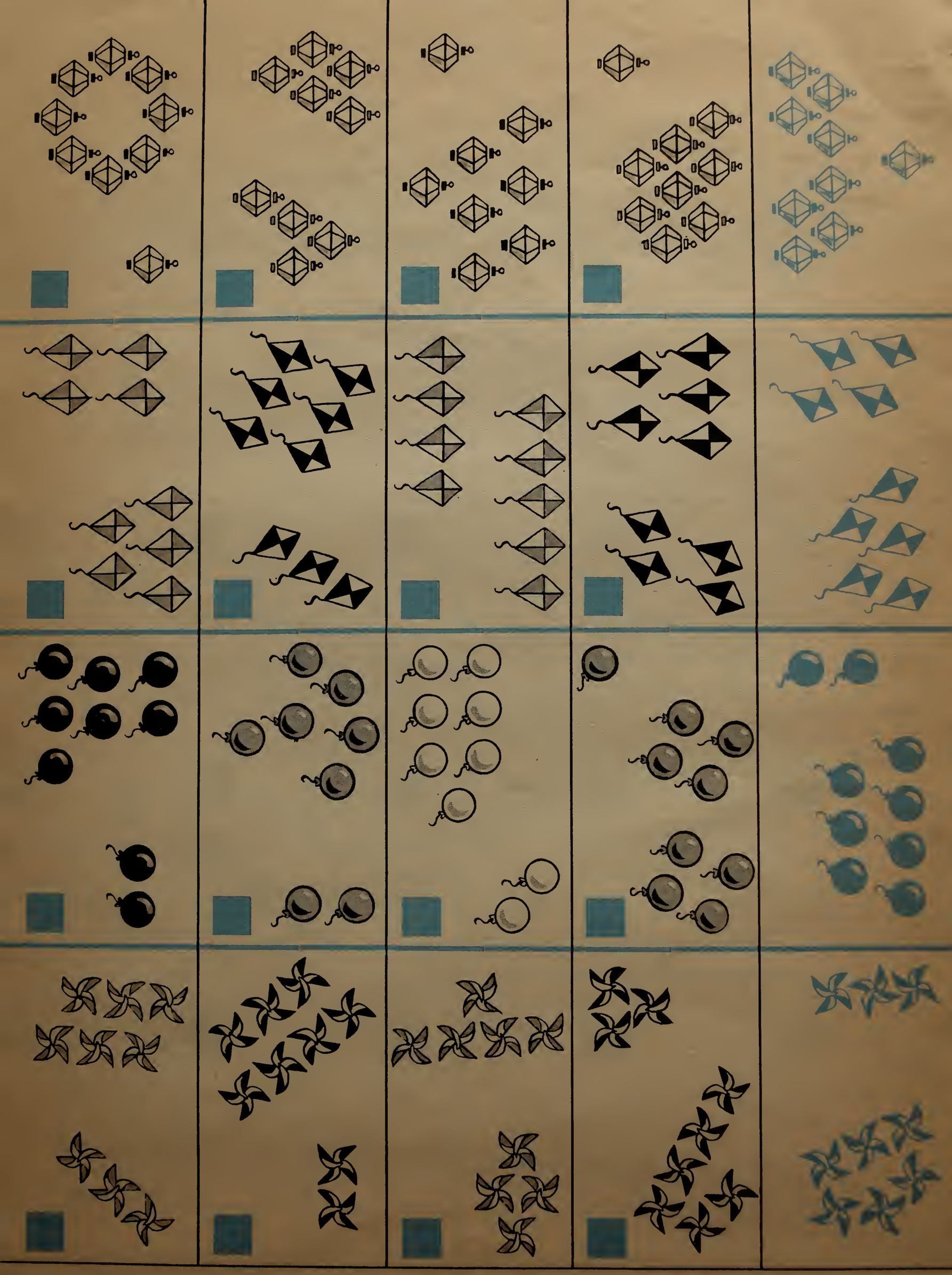
Groups of 8 (pages about Numbers We See). Adapt the exercise on page 21 to this page. Direct attention to the brown key pictures. Get the children to observe that there are eight toys in each picture and that each shows a different pair of groups. Tell them to look at the brown pigs and then to look at each of the other pictures of pigs and put this mark, X, in the brown square in the corner of the picture if the pigs in it are arranged in a group of seven and a group of one, and this mark, ≋ (scribble), in the square if they are arranged in any other groups. In each strip they are to match the key groups in the same way.

Component Groups of 8 (Pages 48-49 **Numbers We See**). The brown strip from page 63 will be used here. Direct the children to place the brown strip so that its edge touches the solid blue line. See the pictures on page 97. Say: "Look at the toy cars on both the brown strip and the white strip. If there are just eight cars in all, put this mark, X, in the little blue square. If there are not just eight cars, put this mark, ≋ (scribble), in the blue square. Do the same for the wheelbarrows, boots, engines, and airplanes." Direct the children to work in the same way for the other three positions of the brown strip. The blue strip will be used with page 67.

Component Groups of 9 (Pages 50-51 **Numbers We See**). Say: "On this page you are going to put toys in groups of nine. In each picture you are to put a circle around all of the brown toys and enough of the black ones to make nine in all. When you have finished the work on this page, you should have nine toys in a circle in each of the pictures. Remember that you must always put all of the brown toys in the circle." The children should be able to complete the work on this page independently.

Component Groups of 9 (Pages 50-51 **Numbers We See**). The blue strip from page 65 will be used here. Have the children place the blue strip so its edge touches the solid blue line. See the pictures on page 97. Say: "Look at the rattles on both the blue strip and the white strip. If there are just nine rattles in all, put this mark, X, in the little blue square. If there are not just nine rattles, put this mark, ≋ (scribble), in the blue square. Do the same for the other pictures on this strip." Direct the children to work in the same *way* for the other three positions of the blue strip. Tell them that they will use the pictures on the new blue strip later.



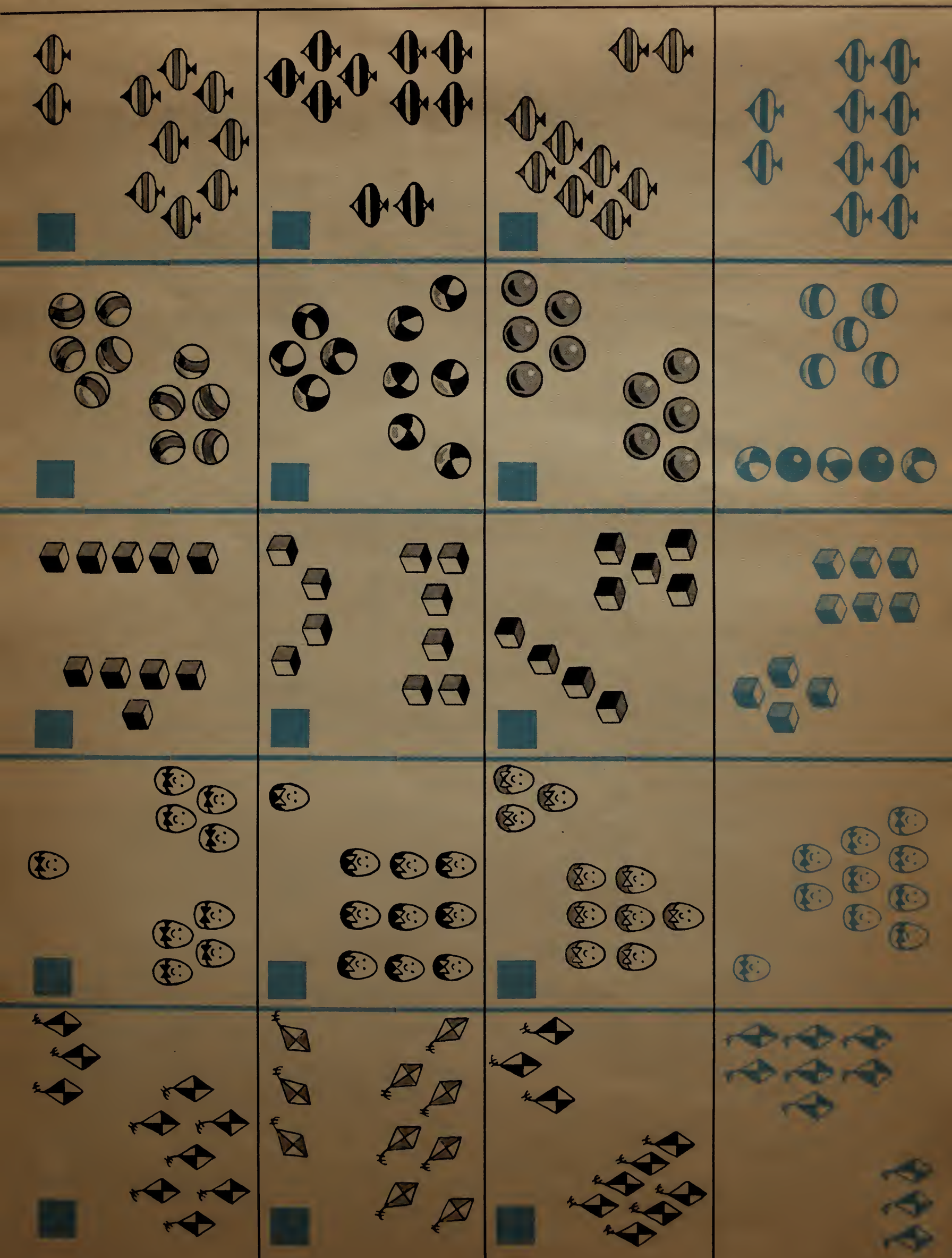


Complete the pattern of ♦ (page 30) Numbers We See). Adapt the exercise for page 31 to this page. Direct attention to the blue key picture. Get the children to observe that there are nine toys in each picture and that each shows a different pair of groups. Tell them to look at the blue lanterns and then to look at each of the other pictures of lanterns and put this mark, X, in the blue square in the corner of the picture if the lanterns in it are arranged in a group of eight and a group of one, and this mark, ⋈ (scribble), in the square if they are arranged in any other groups. They are to match the key picture in the other strips in the same way.

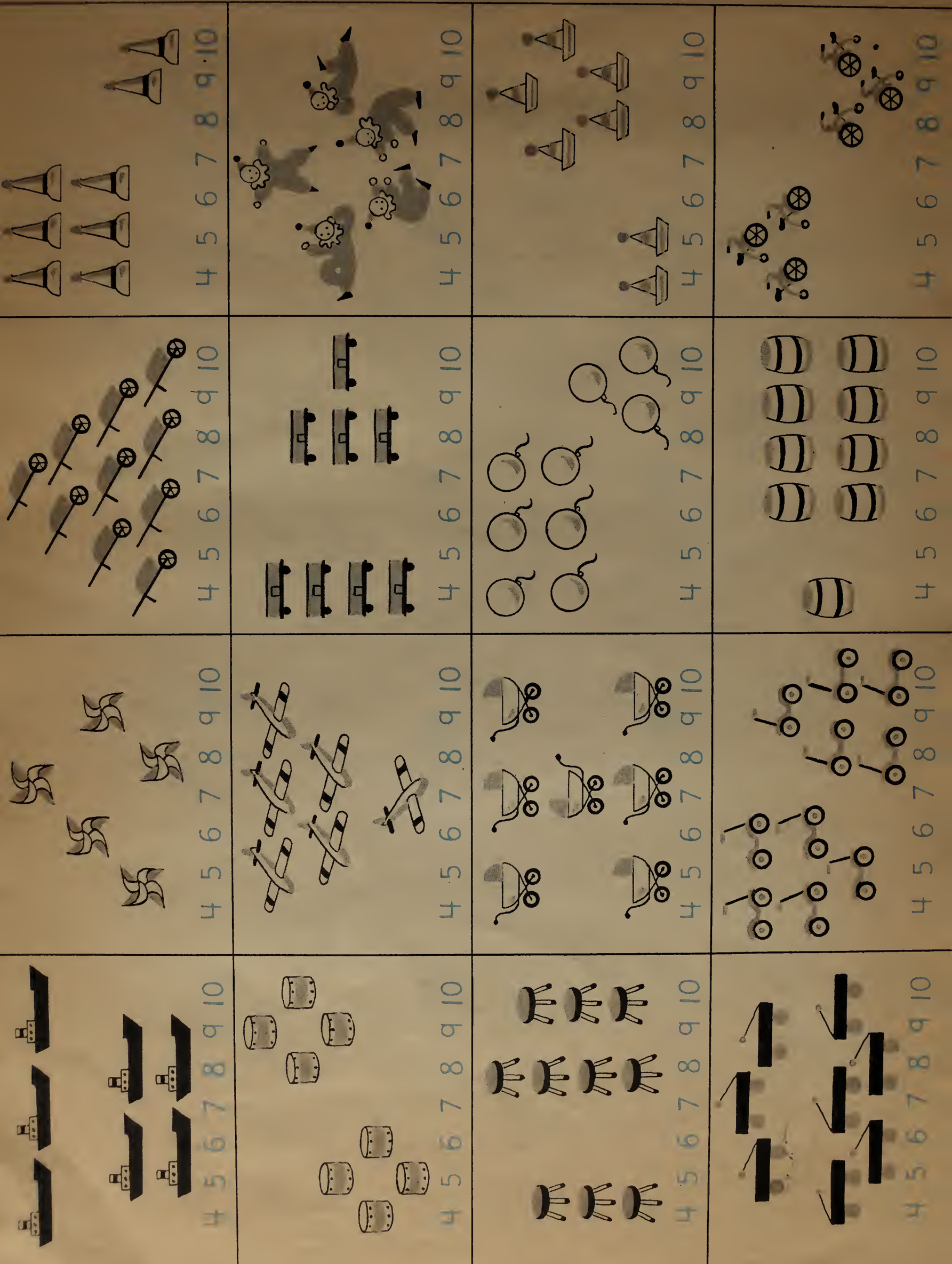
Component Groups of 10 (Pages 52-53 **Numbers We See**). The blue strip from page 67 will be used here. Direct the children to place the blue strip so that its edge touches the solid blue line. See the pictures on page 97. Say: "Look at the kites in the two pictures. If there are just ten kites in all, put this mark, X, in the little blue square. If there are not just ten kites, put this mark, ≠ (scribble), in the little blue square. Do the same for each of the other pictures with the blue strip in this position. Remember that you are to decide whether or not there are ten toys in all." Now direct the children to work in the same way with the blue strip in the other four positions.

Component Groups of 10 (Pages 52-53 **Numbers We See**). Have the children look at the wheelbarrows in the first picture. Say: "In this picture draw a circle around just ten wheelbarrows. Use all of the group of blue wheelbarrows and enough of the others so there will be ten in all. Do the same with each of the other pictures on this page. In each picture be sure to draw the circle around all the blue toys and enough of the others so there will be ten in all." Let the children complete the work on this page independently.

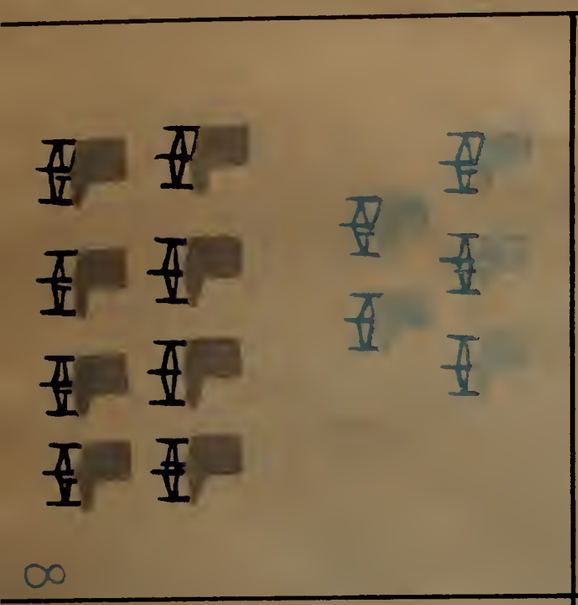
Component Groups of 10 (Pages 52-53 **Numbers We See**). Adapt the directions for page 23 to this page. Direct attention to the blue key pictures. Get the children to observe that there are ten toys in each picture and that each shows a different pair of groups. Tell them to look at the blue tops and then to look at each of the other pictures of tops and put this mark, X, in the blue square in the corner of the picture if the tops in it are arranged in a group of eight and a group of two, and this mark, ≋ (scribble), in the square if they are arranged in any other groups. In each strip they are to match the groups in the key picture in the same way.

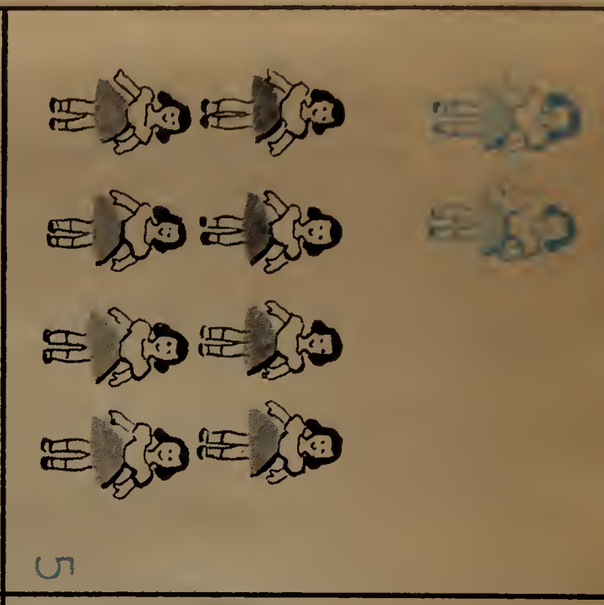


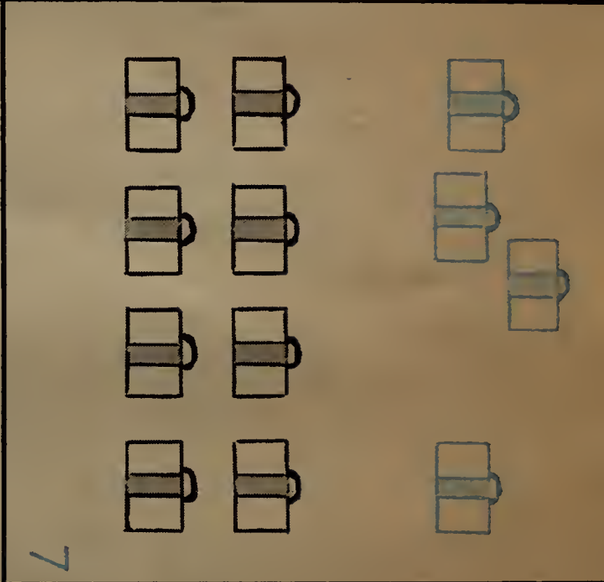
Recognition of Groups (Pages 54 55 **Numbers We See**). Say: "Look at the picture of the boats. Without counting, decide how many boats there are. Now look at the row of blue numbers under the boats. Find the number that tells how many boats there are and draw a circle around that number. Look at each of the other pictures and decide, without counting, how many objects there are. Then draw a circle around the blue number that tells how many objects there are." Let the children complete the work on this page independently.

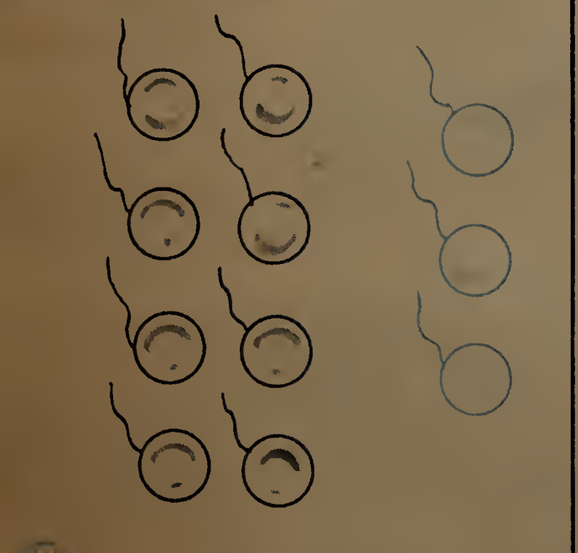


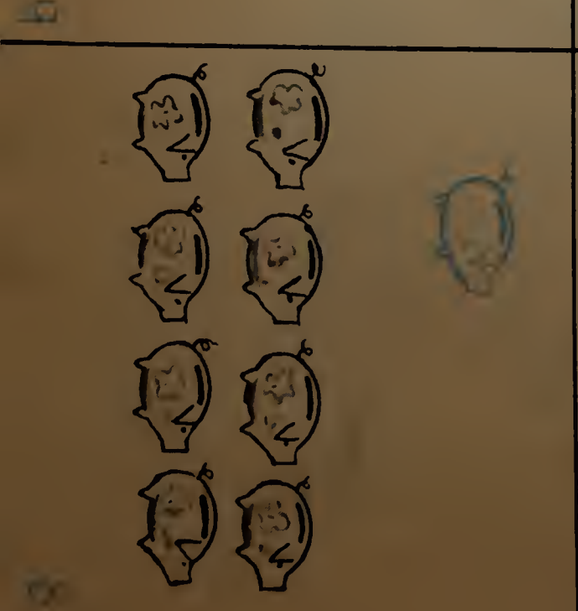
Recognition of Groups (Pages 54-55 **Numbers We See**). Direct attention to the dolls in the first picture. Say: "Look at the blue number in the corner of this picture. That number tells you to draw o circle around five of the dolls. You must use all of the blue dolls and enough of the others so there will be five in the circle. In each of the other pictures on this poge look ot the blue number ond then draw a circle around that mony toys. Be sure to use all of the blue toys in each picture."

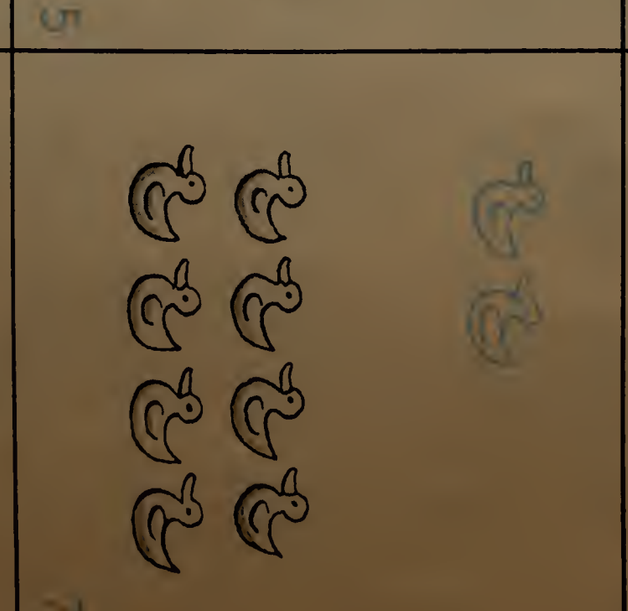




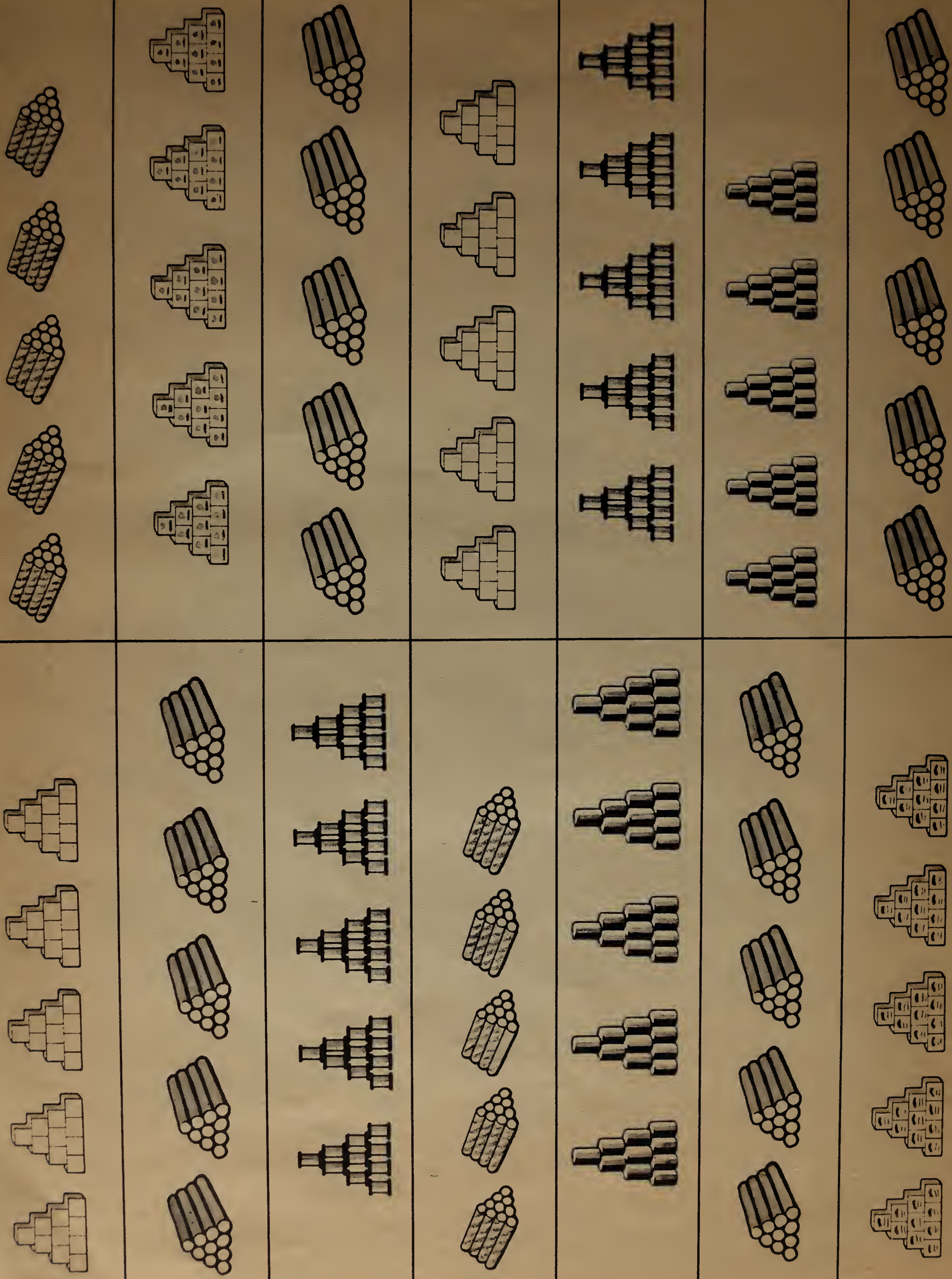




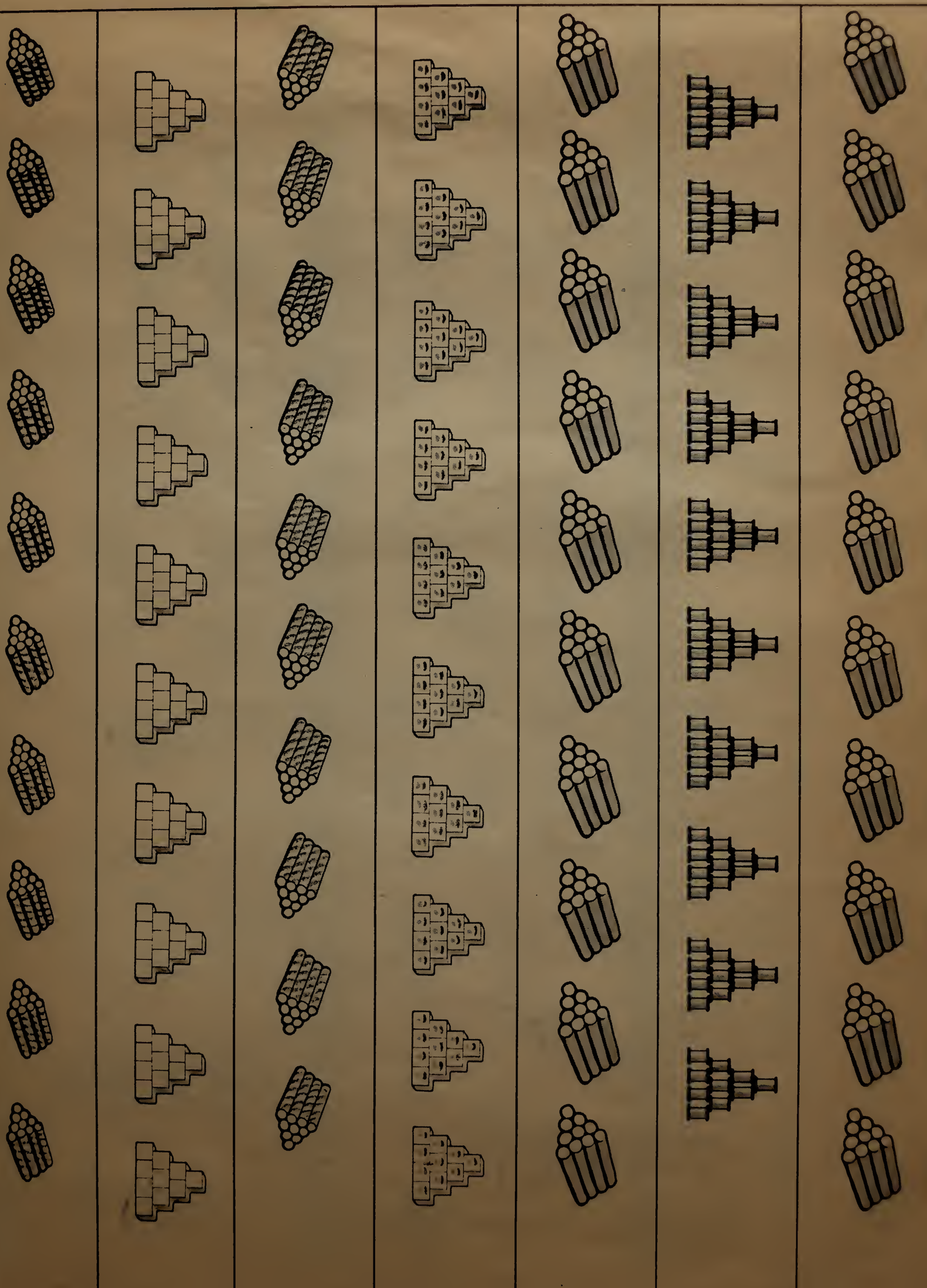




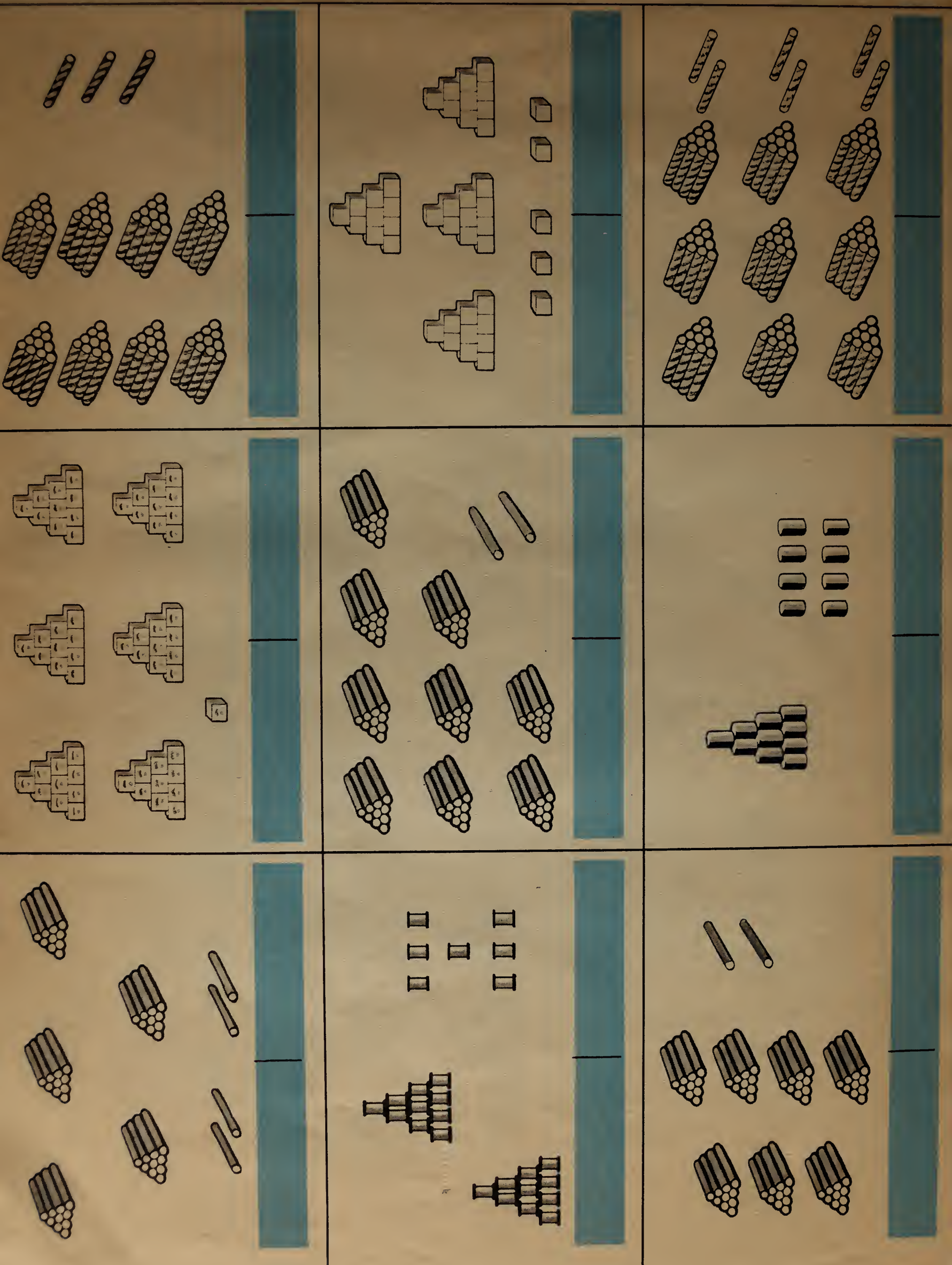
The Decades to 50 (Pages 54-57 **Numbers We See**). Let the children discover that the objects are arranged in piles of 10. Say, "Look at the first picture. Begin at the left [point to the left] and count the piles of blocks by tens until you have 30 blocks. Point to each pile as you count it. Count like this: '10, 20, 30.' Now draw a line joining the **tops** of the piles you counted. Next look down at the picture of the logs. Count until you have 50 logs. Join the **tops** of the piles you counted." The children should now be able to proceed in this way as you call decade numbers from 10 to 50 for the other pictures. (Directions continued on page 97)



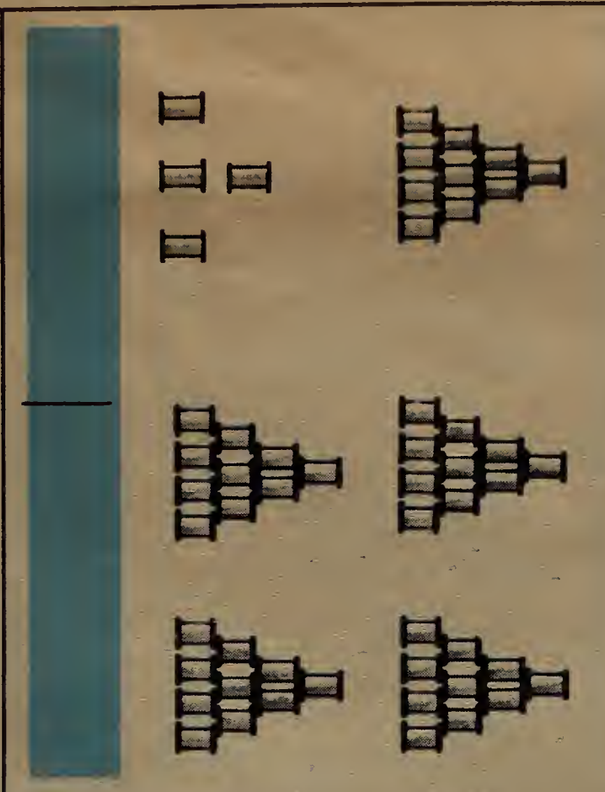
The Decades to 100 (Pages 58-59 **Numbers We See**). Adapt the directions given for page 74 for use with this page. Note, however, that each picture on page 75 shows 100 objects arranged in piles of 10. As you call each decade number, have the children join the piles at the top (and, later, at the bottom) to show the number called. Emphasize the decade numbers 60 through 100. The pictures may be used a third time by having the children use crayons of a different color to make the joining lines.

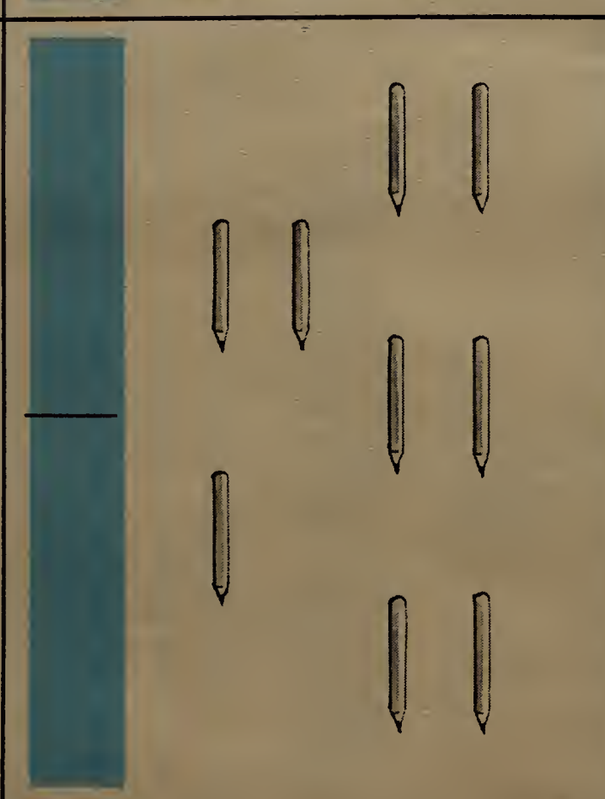


Tens and Ones (Page 60 **Numbers We See**) Direct the children to look at the pictures and get them to notice that the objects are arranged in piles of tens and ones. Point out the black dividing line on the blue answer strip. Then say: "Look at the first picture of the logs. On the left side [point to it] of the black line make this tally mark, I, for each pile of 10 logs. On the right side make a tally mark for each log that is not in a pile of 10. Do this for each of the other pictures on the page."



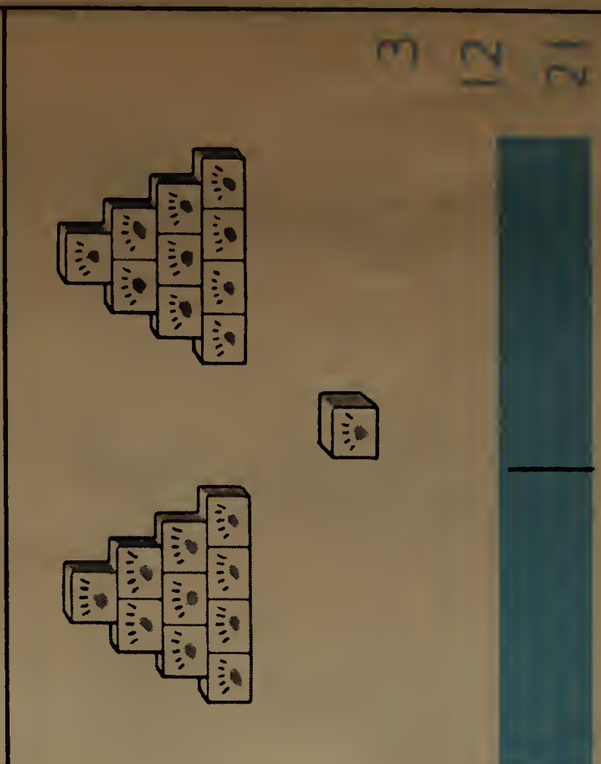
Tens and Ones (Page 61 **Numbers We See**). Directions similar to those given for page 76 may be used for this page also. Be sure the children accept the piles and bundles as containing 10 objects each, even though the pyramid form is not used in every picture.

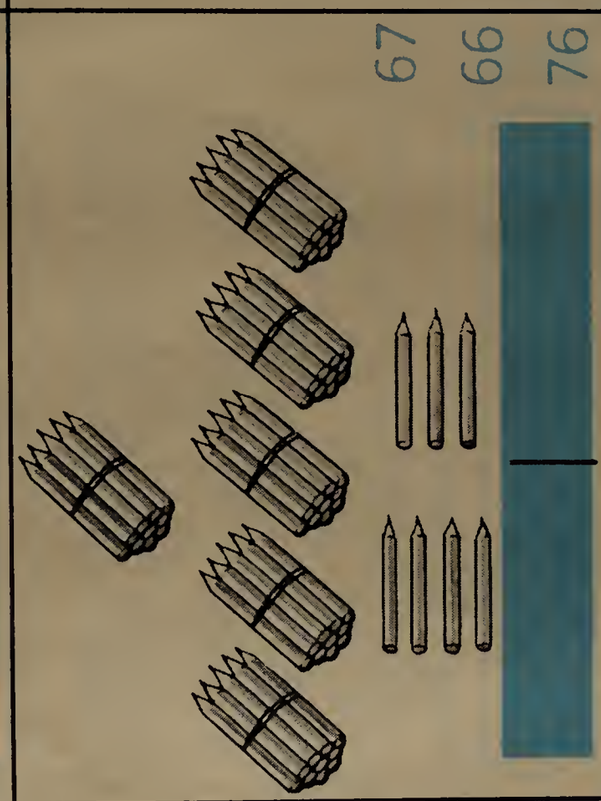


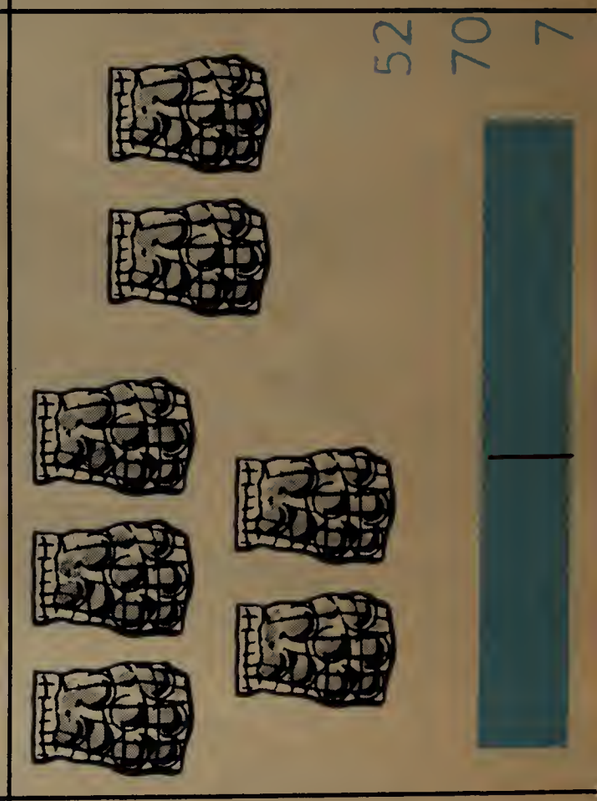


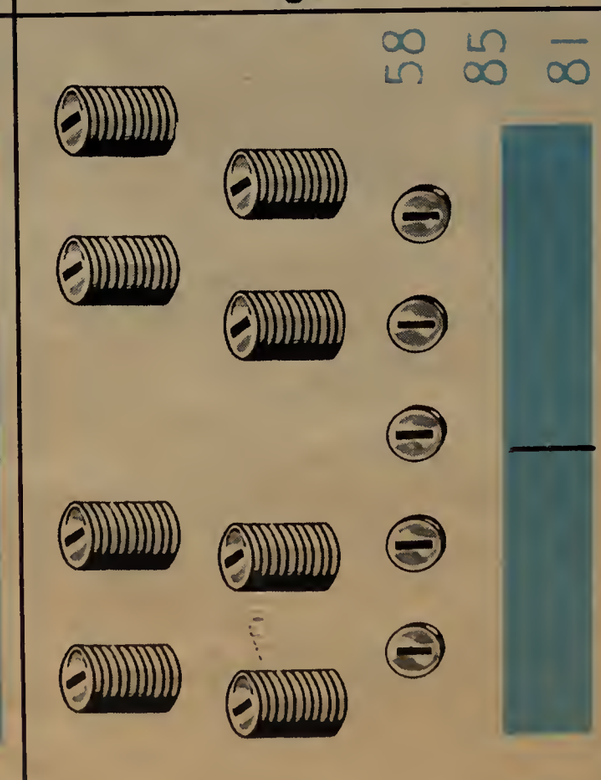
...ake this tally mark, I, for each 10 pieces of candy. Should you make ...ony marks for ones on the right side of the blue answer strip? Find the blue numbers in this picture. Draw a circle around the number that shows how many pieces of candy are in this picture." Have the children work independently with each of the other pictures.

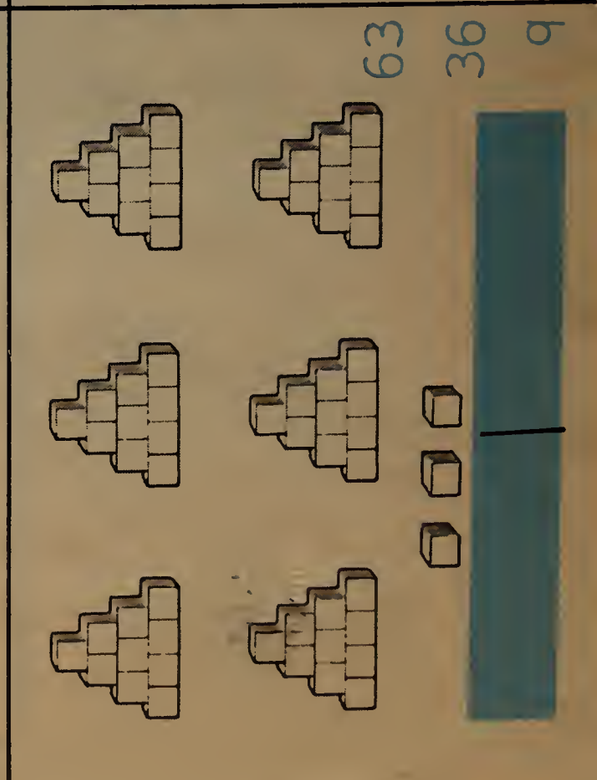
...ures (Numbers We See). Direct atten... to the pictures and have the children notice that some objects are in piles, boxes, or bundles of 10, while others are not in piles of 10. Say: "Look at the boxes of candy in the first picture. Each box has 10 pieces of candy in it. On the left side of the blue answer strip











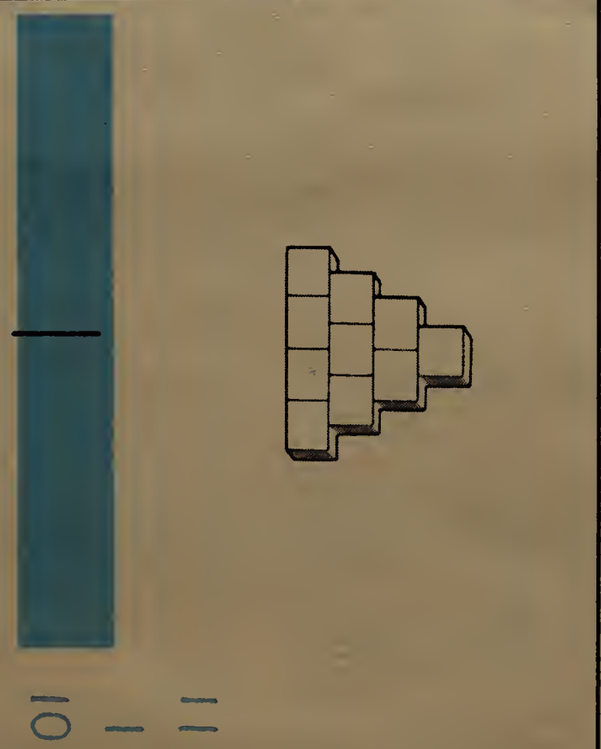
Number Symbols to 100 (Page 63 **Numbers We See**). The directions given for page 78 may be adapted for this page. That is, have the children make tally marks to the left of the line in the blue answer strip for the tens and to the right of the line for the ones. Then direct the children to circle the blue number that shows how many objects are in the picture.

30
21
12

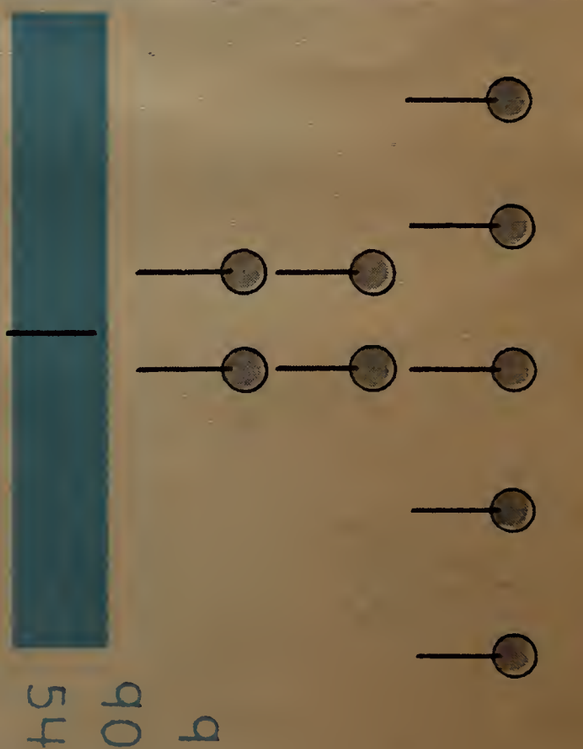
63
36
90

9
90
54

8
80
88



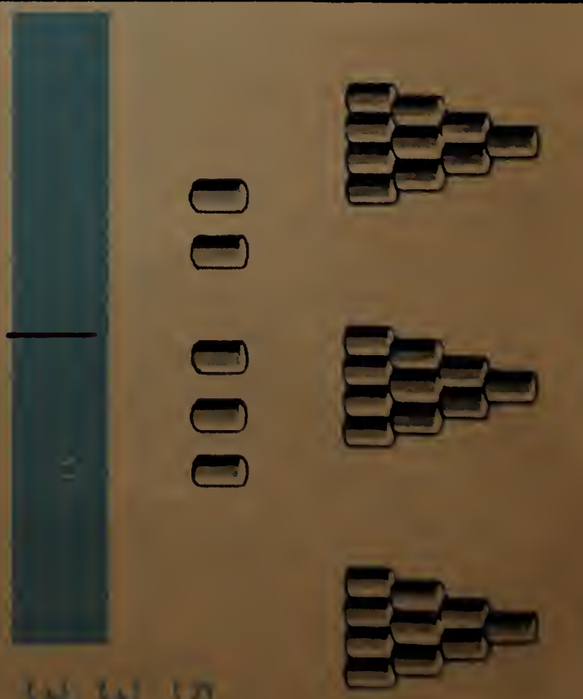
11
10



9
90
54

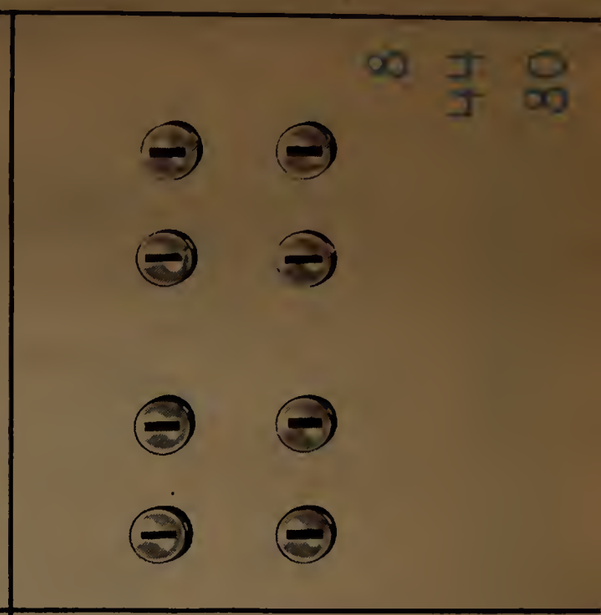
53
80
35

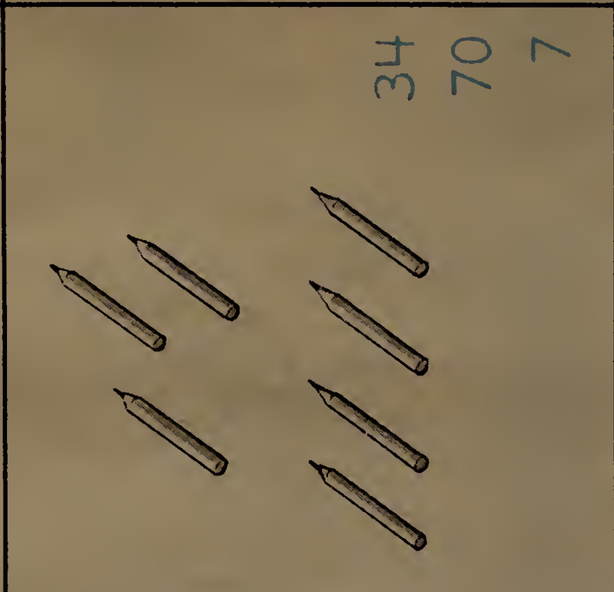
64
46
40

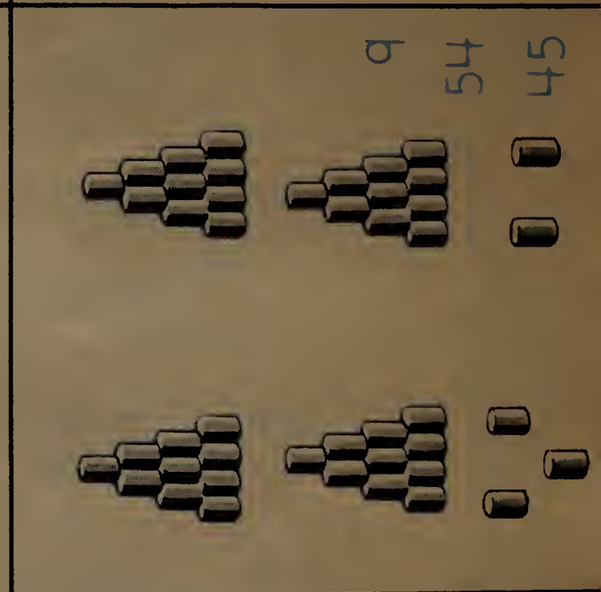


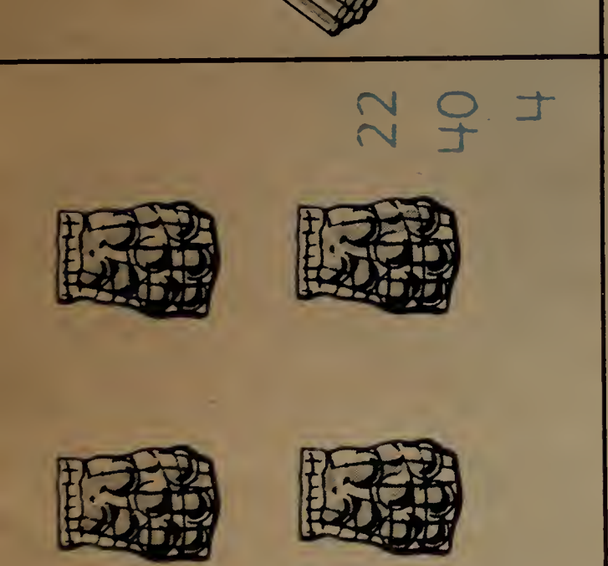
53
35
32

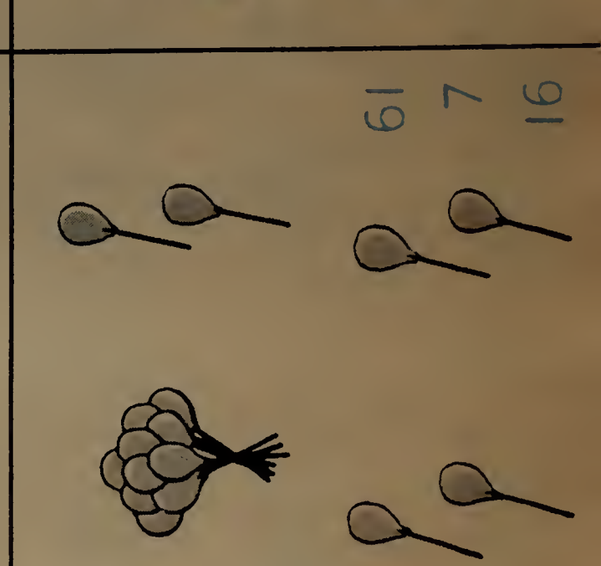
Number Symbols to 100 (Page 63 **Numbers We See**). Have the children look at the pictures and discover that there are 10 objects in each pile, bundle, or box. Be sure they recognize the pennies in the last picture. Say: "Look at the spools in the first picture. How many spools are in the pile? How many spools are not in the pile of 10? How many spools are there in the picture? Now find the blue number that shows the correct number of spools and draw a circle around it. Do the same for each of the other pictures on the page."

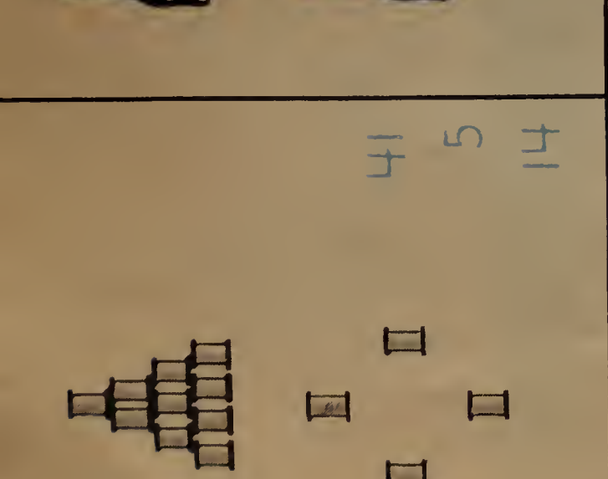


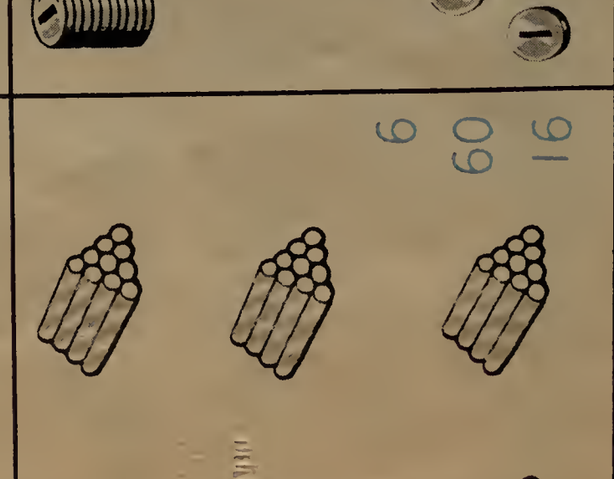


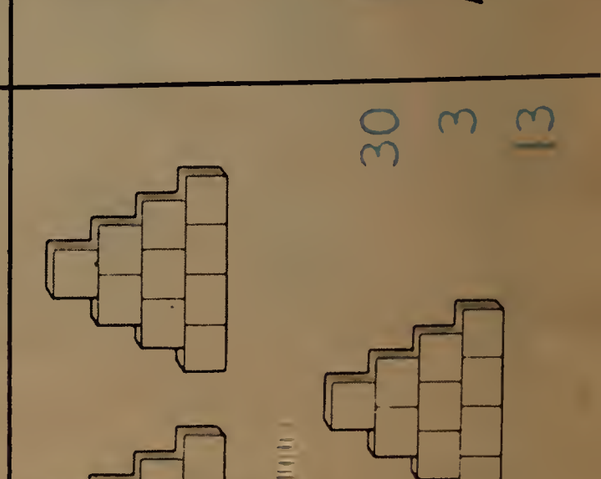




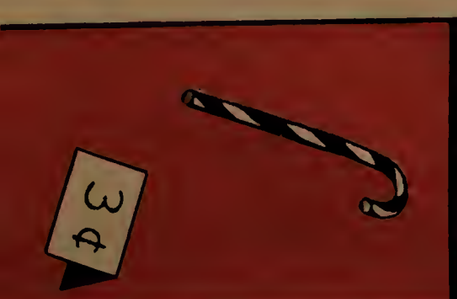


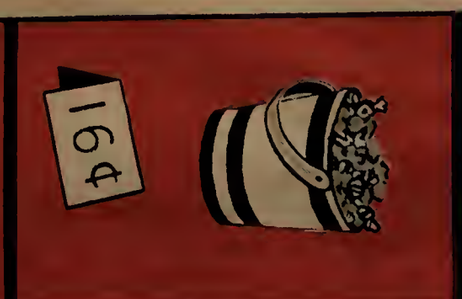


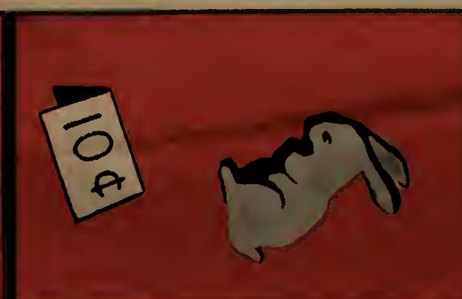


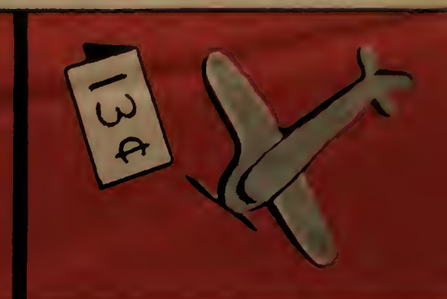


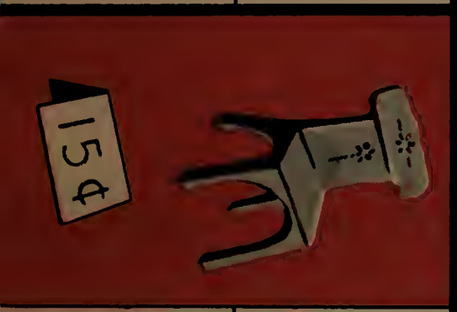
Counting Dimes and Pennies (Page 64 **Numbers We See**). Let the children talk about the toys in the two red strips. Then say: "Beside each toy are two pictures of coins. The coins with the number 1 on them mean pennies. The coins with the number 10 on them mean dimes. How much does the airplane cost? What coins does the top picture of coins show? Count the coins you would use to buy the airplane and cross out all the other coins in the picture. Look at the other picture of coins beside the airplane and show the ones you would use to buy it in the same way. For each picture of coins beside a toy, show the ones you would use to buy the toy in the same way."

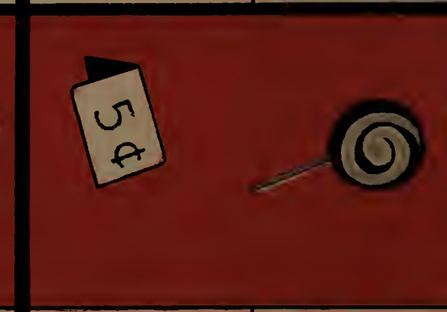






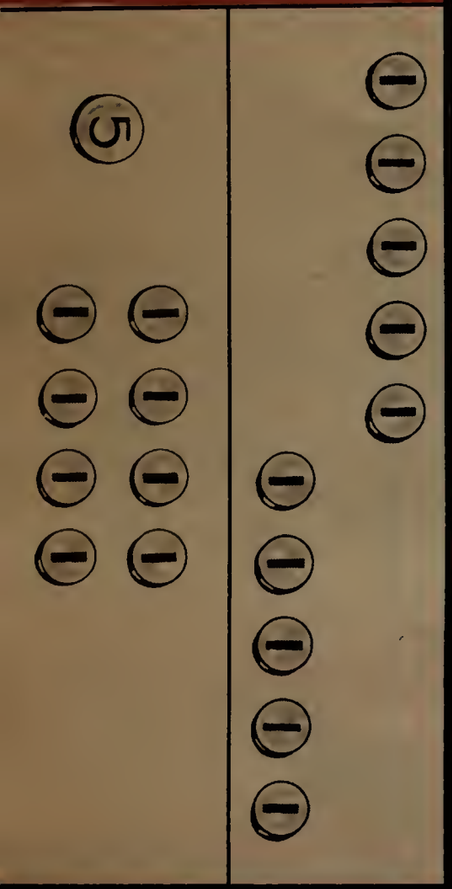


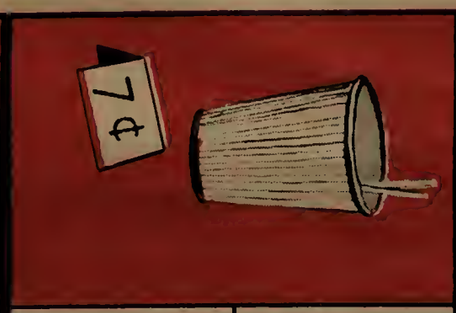


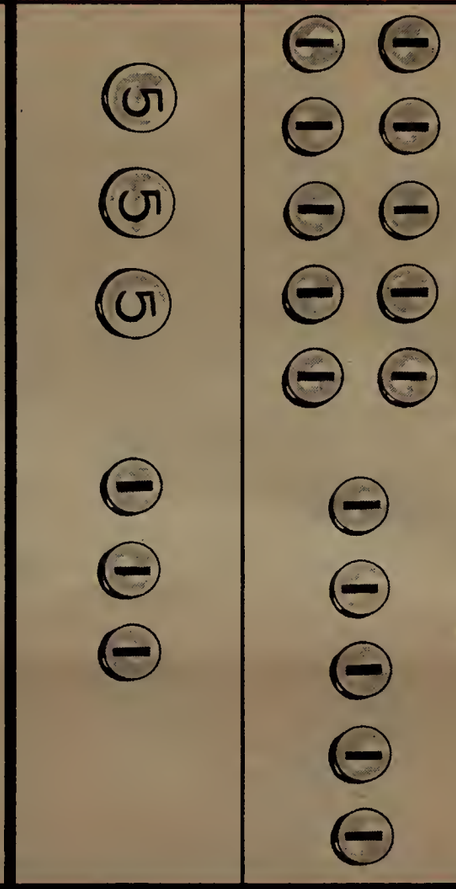


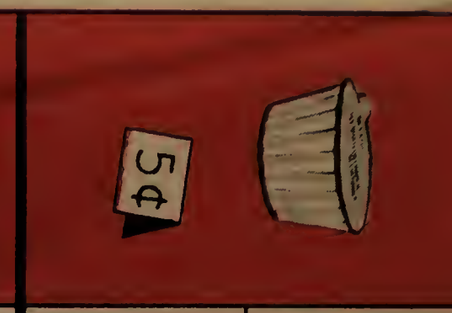
Counting Dimes and Pennies (Page 64 **Numbers We See**). The directions used for page 81 may be adapted for use with this page. Be sure the children know how to distinguish between the pennies and dimes. Have the children look at each object in the red strips and see how much it costs. Then in each of the two accompanying pictures of coins have them cross off those coins in each picture that they would not need to buy the object.

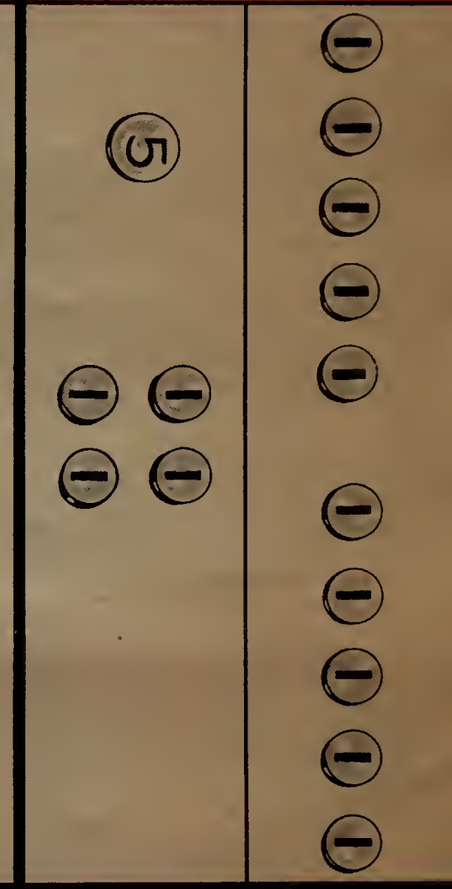
Counting Nickels and Pennies (Page 65 **Numbers We See**). Let the children identify the objects in the red strips. Then say: "The coins beside the pictures in the red strip mean nickels when the number 5 is on them. What do the coins with the number 1 on them mean? How much does the paper cup of ice cream cost? In each of the two pictures of coins beside the ice-cream cup cross off the coins you would not use to buy this ice cream. Do the same in each of the two pictures of coins beside the other objects."

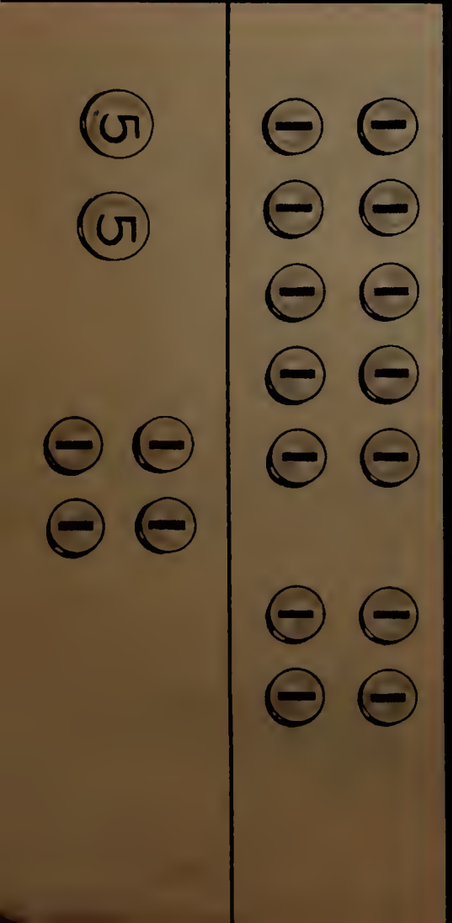


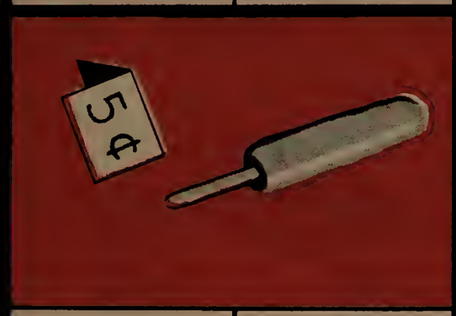


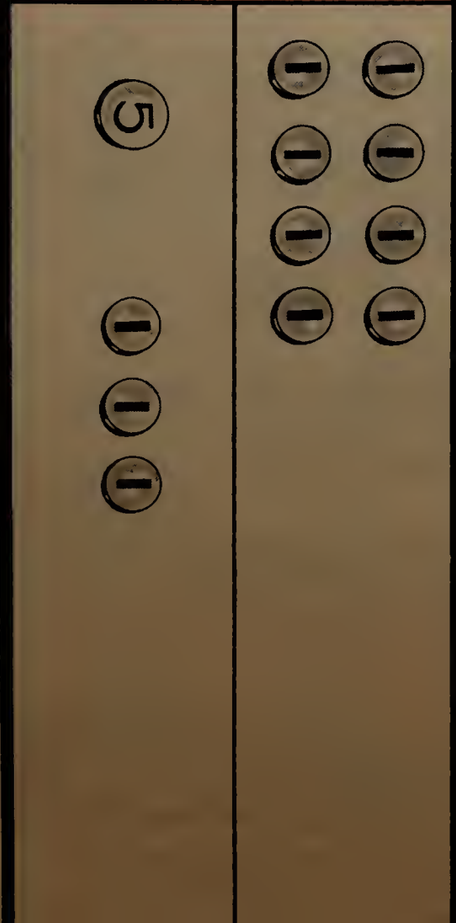


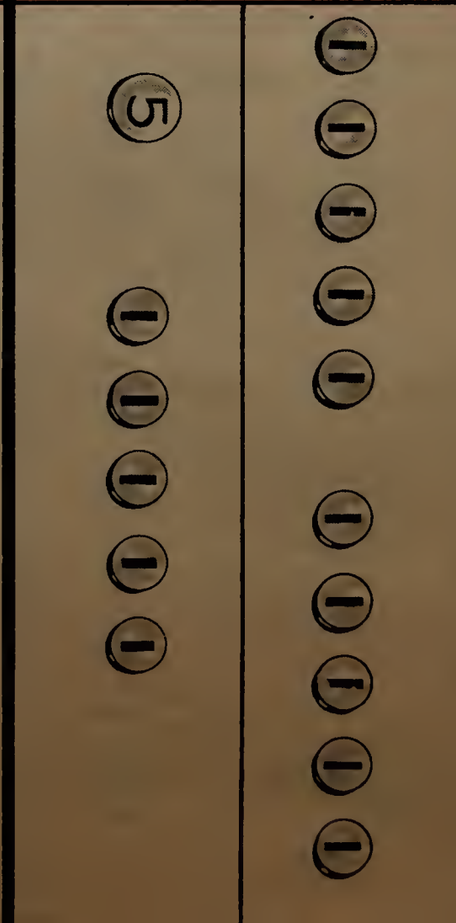


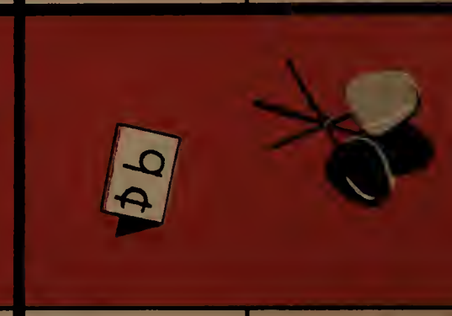




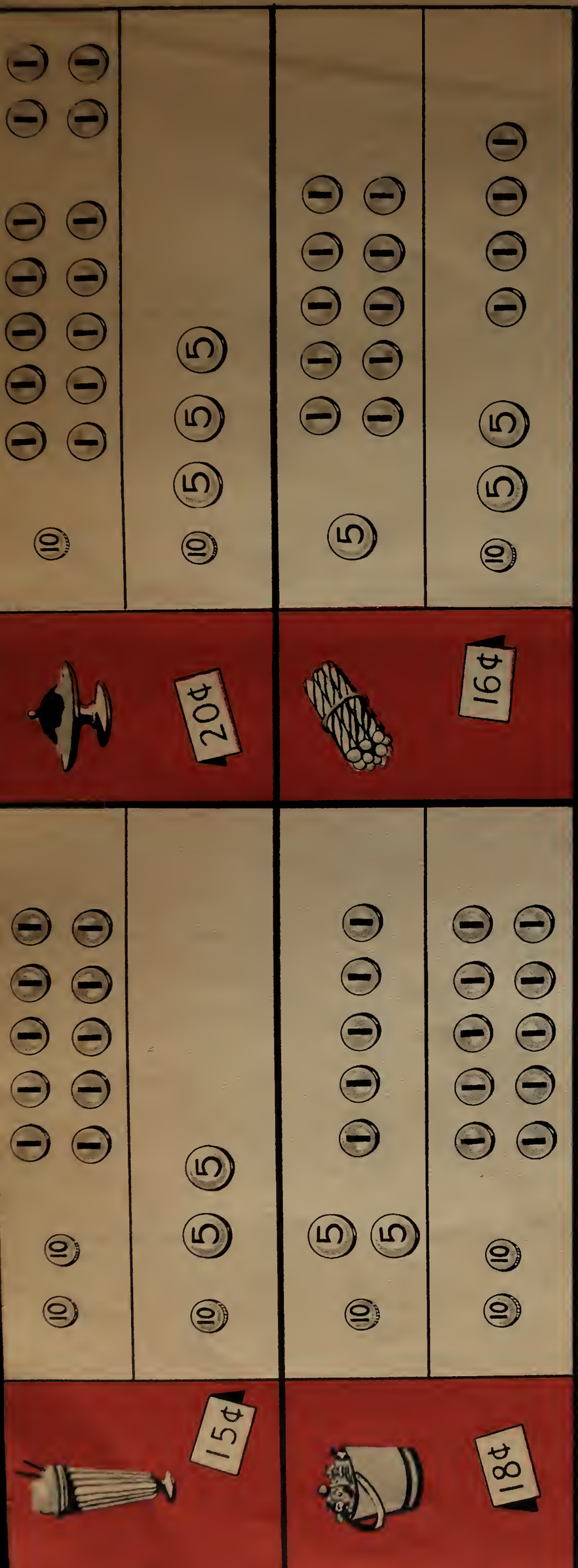




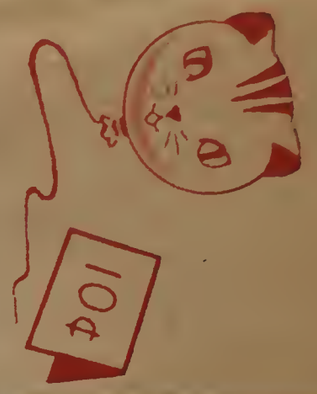


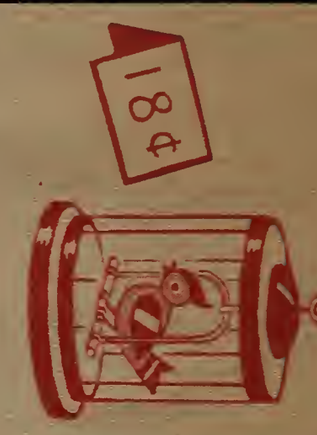


Counting Dimes, Nickels, and Pennies (Page 65 **Numbers We Read**) The directions given for page 83 may be adapted for use with this page. Since three kinds of coins are involved, a much higher degree of discrimination is called for here; so be sure the children can identify the pennies, nickels, and dimes before they begin to cross off the coins in the two pictures beside each object in the red strips.



Cent, Nickel, Dime (Page 66 **Numbers We See**). Say: "Look at the picture of the balloon. How much does the balloon cost? Look at the picture of money under the picture of the balloon. Is there just enough money to buy the balloon? If there is just enough, draw a circle around the money. If there is more than enough, count out the money you would use to buy the balloon and cross off the rest. Do this for each picture of coins under the picture of the balloon." Have the children respond in the same way with the other strips.



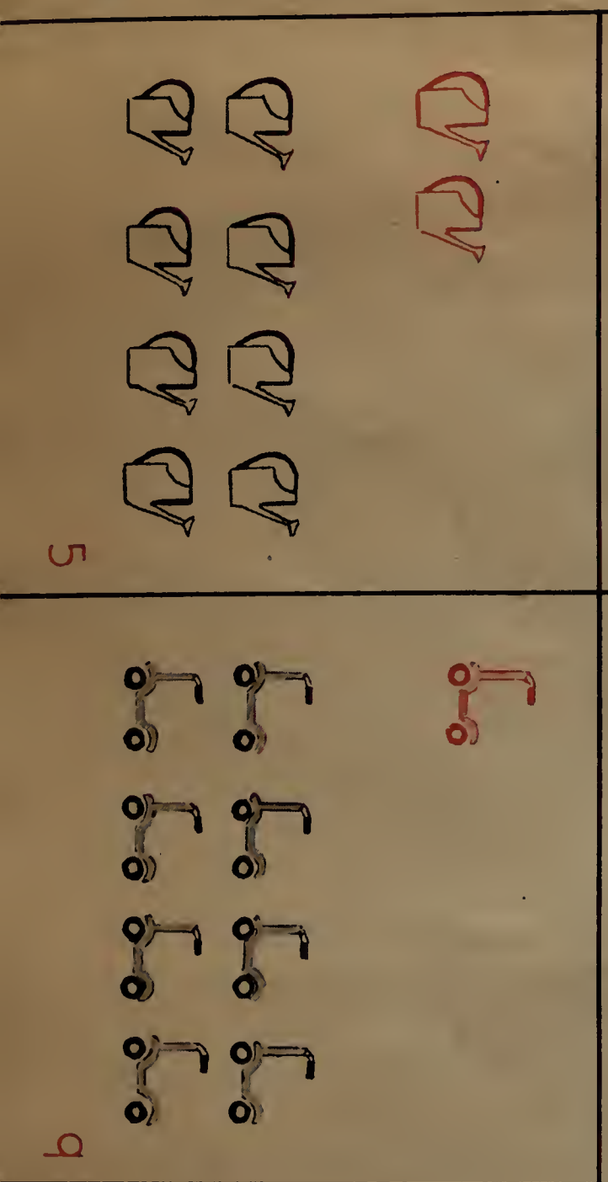


Review: Concepts of Size (Page 67 **Numbers We See**) Direct attention to the pictures of the elephants. Say: "Find a black elephant that is the same size as the elephant on the red strip. Put this mark, —, in the red square under that elephant. Are any elephants smaller than the elephant on the red strip? Put this mark, O, in the red square under each smaller elephant. If any elephants are larger than the one on the red strip, put this mark, ●, in the red square under each larger elephant. Do this for each of the other pictures. Sometimes you will find two things that are shorter, longer, taller, smaller, or the same size. Be sure to put the correct mark in the red square for each."

Review: Recognition of Groups (Pages 68-69 **Numbers We See**). Direct attention to the first picture ond to the red numbers below the airplanes. Say: "Without counting, decide how many oirplones there are. Then find the red number that shows how many airplanes there are and draw o circle around it. For each of the other pictures on the page decide how many toys are in the picture and draw a circle around the correct red number for that picture." The children should work independently. Be sure they do not count the objects.

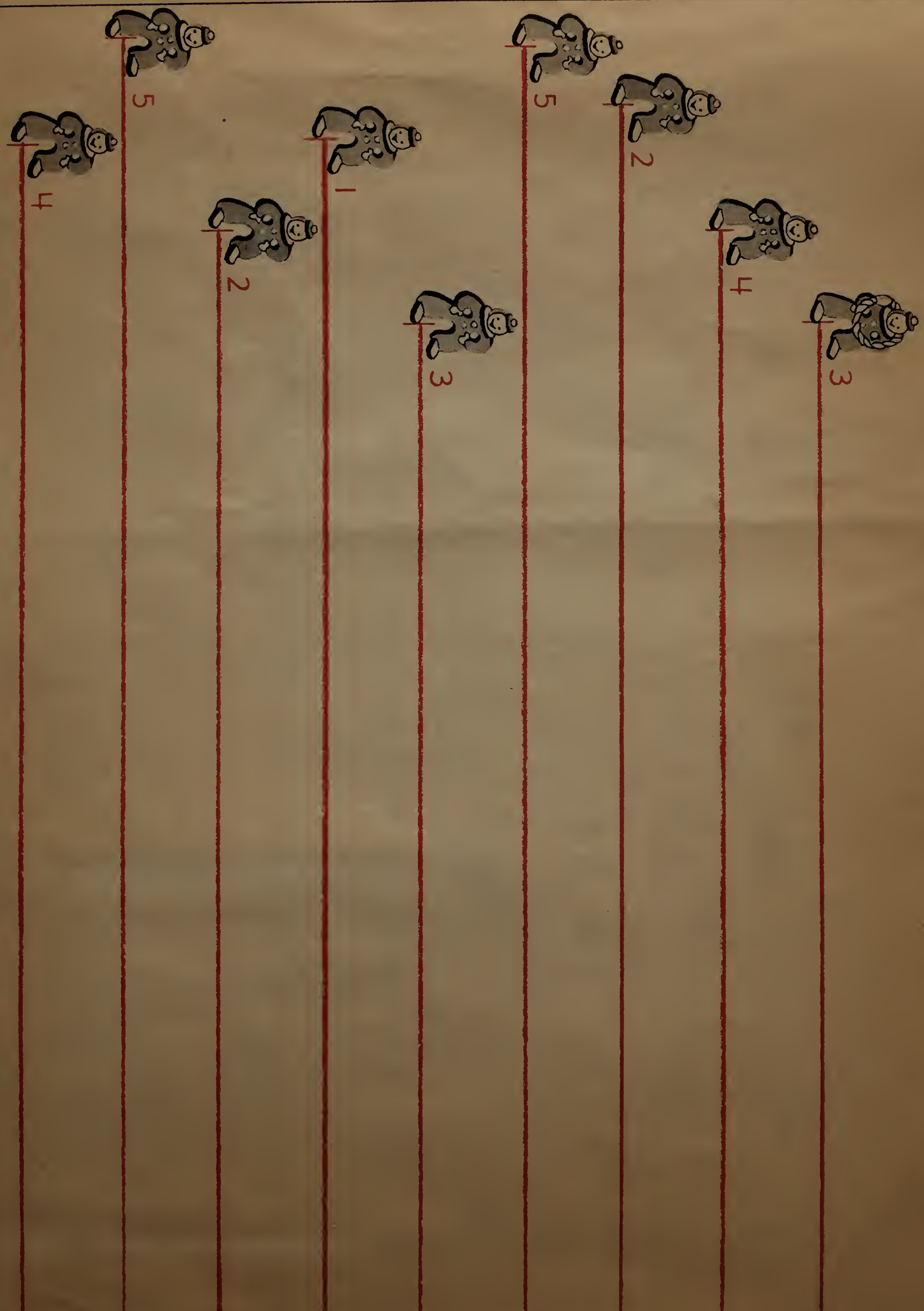
Review: Recognition of Groups (Pages 68 69 **Numbers We See**). Adapt the directions given for page 87 for use with this page. For each picture the children are to determine, without counting, the number of objects in the picture and are then to encircle the correct red number for that picture. Have the children work independently and be sure they proceed without counting individual objects. Rather, encourage the children to group the objects by eye into the familiar groupings that will enable them to recognize a number.

Review: Recognition of Groups (Pages 68-69 **Numbers We See**). Direct attention to the first picture. Soy: "Look at the red number in this picture. You are to draw a circle oround the group of red motor-boats and enough of the block ones so that there are eight boats in your circle. Do the same for each of the other pictures. Remember that in eoch picture you must olwoys drow your circle oround all of the red toys ond enough of the black ones to make the group shown by the red number."

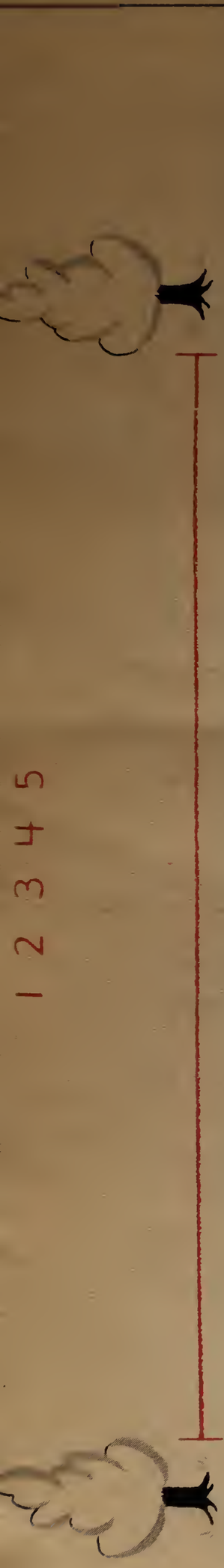


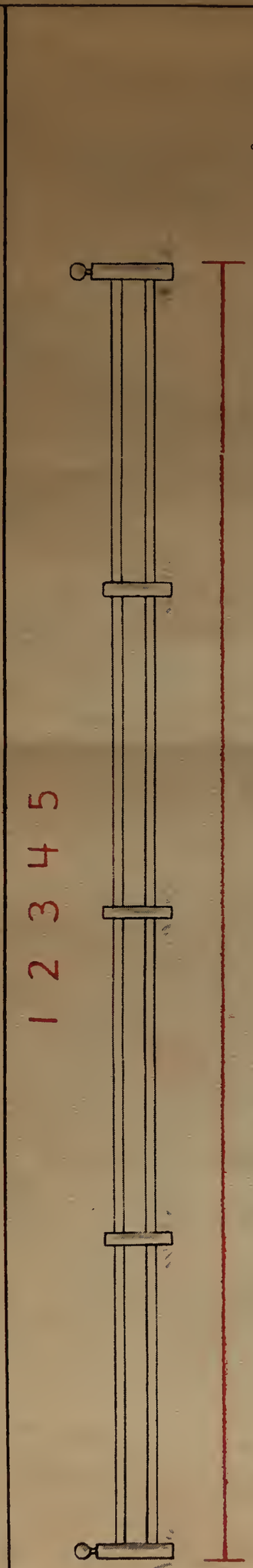
Review: Recognition of Groups (Pages 68-69 **Numbers We See**). Adapt the directions given for page 89 to the work on this page. In each picture the children again are to draw a circle around the entire group of red toys and enough of the black toys to make the group indicated by the red number. Be sure the children do this without resorting to counting individual objects.

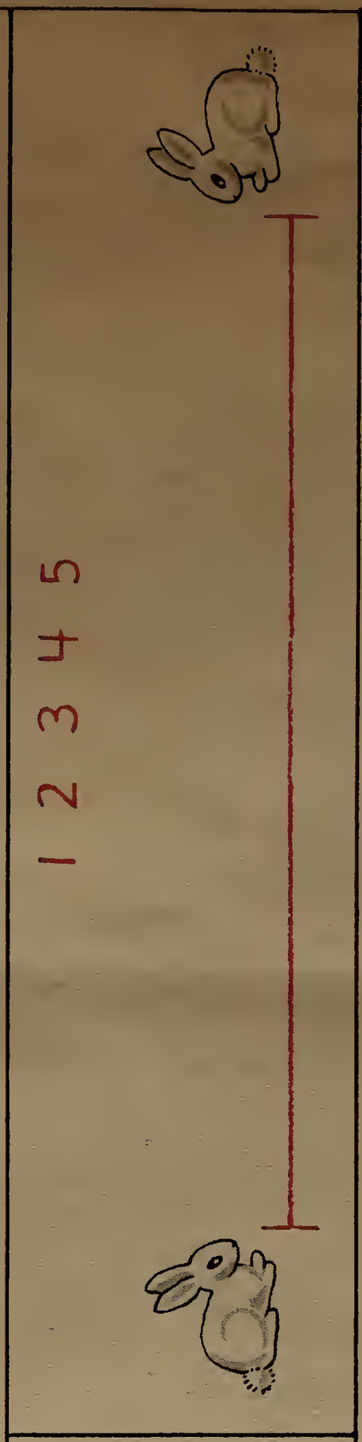
Review: The Unit in Measurement (Page 70 **Numbers We See**). Give each child one 2-inch stick. Say: "What number is beside the clown in the first picture? This number tells you to put your stick down three times along the red line in this picture. Put your stick on the red line so that one end of it is touching the little line beside the clown's foot. Make o mark ot the other end of the stick. Pick up the stick and put it down again with one end touching the mark you made. Make another mark ot the end of the stick. Do this as many times as the number tells you. Now for each of the other lines put down your stick the correct number of times."

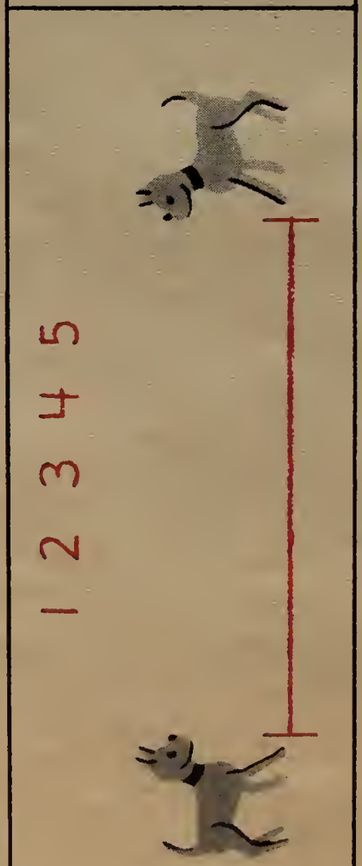


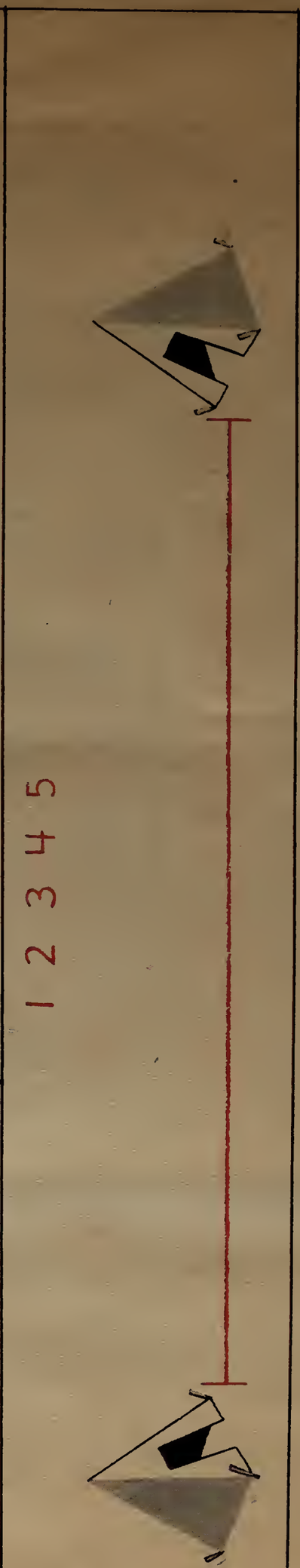
Review: The Unit in Measurement (Page 70 **Numbers We See**). Almost the directions given for page 37. Tell the children that in each picture they are to measure the distance between the two objects by putting a 2 inch stick on the line, marking the end, and repeating this as many times as is necessary. They are then to draw a circle around the red number in the picture that tells how many times the stick was put down. Direct them to let the circle remain as it is if the distance is almost or not quite that number of sticks. If the distance is a little more than or farther than that number of sticks, direct them to fill in the circle with pencil or crayon.

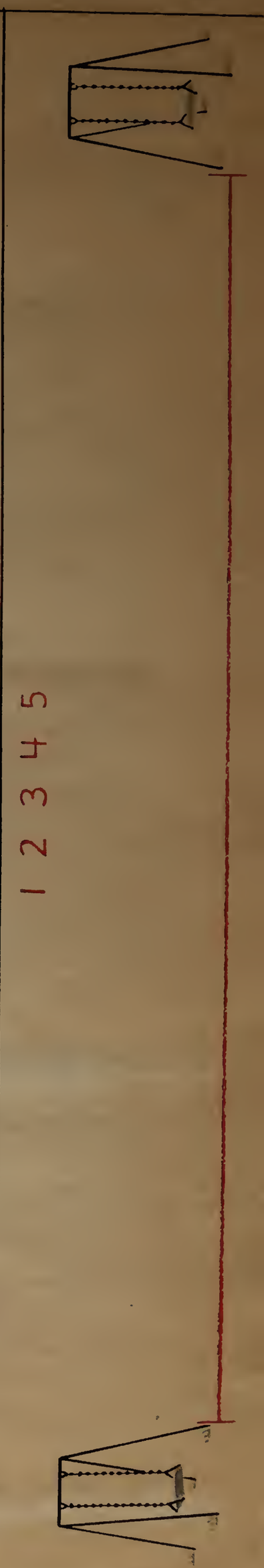




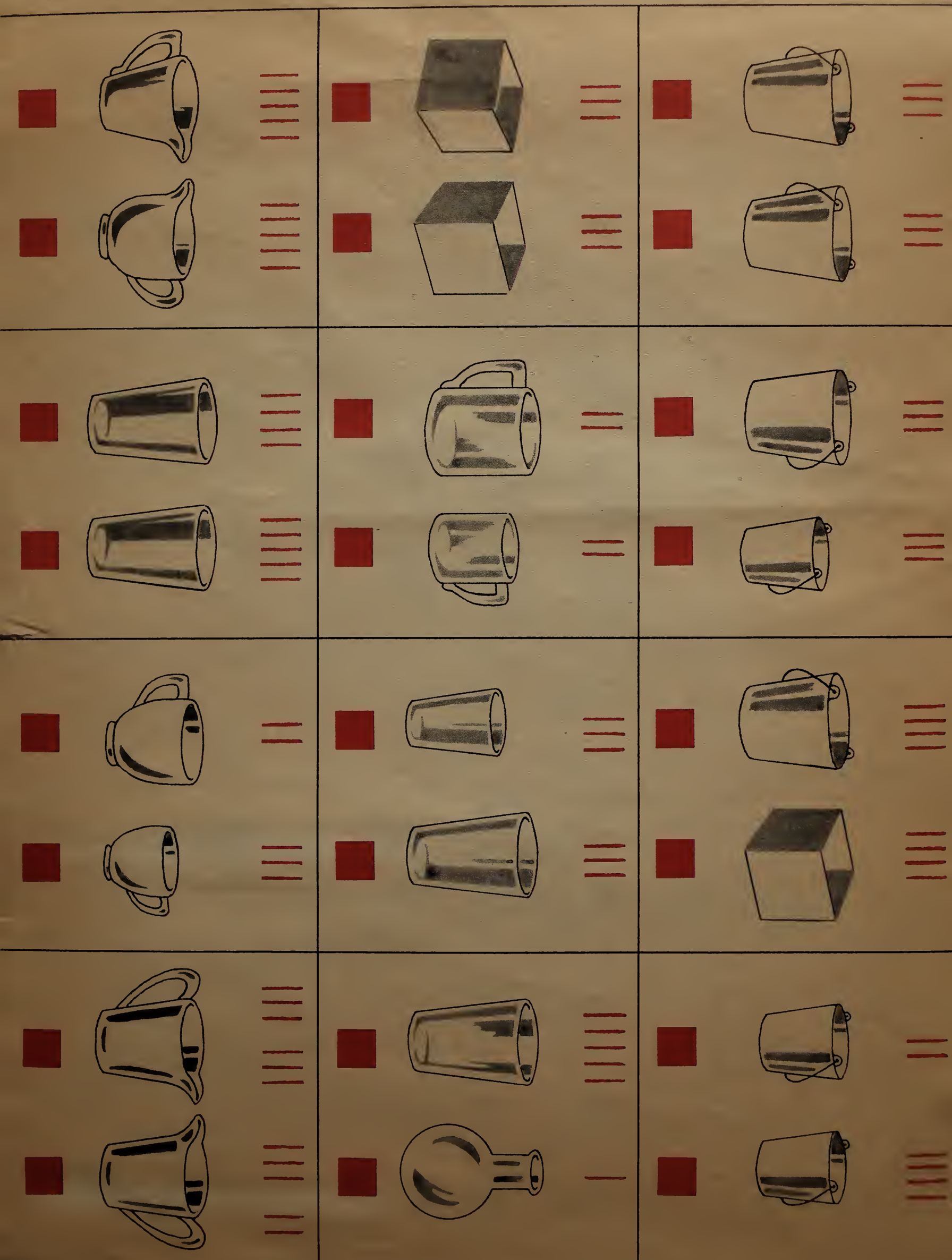




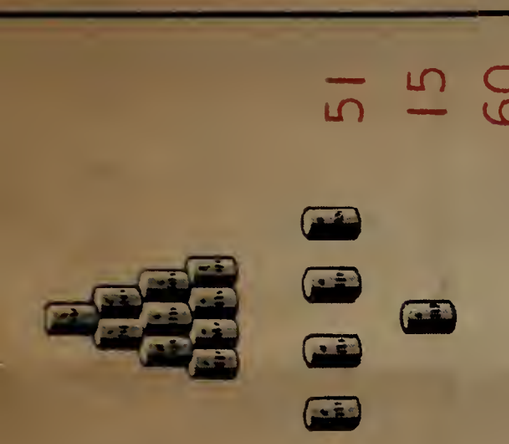


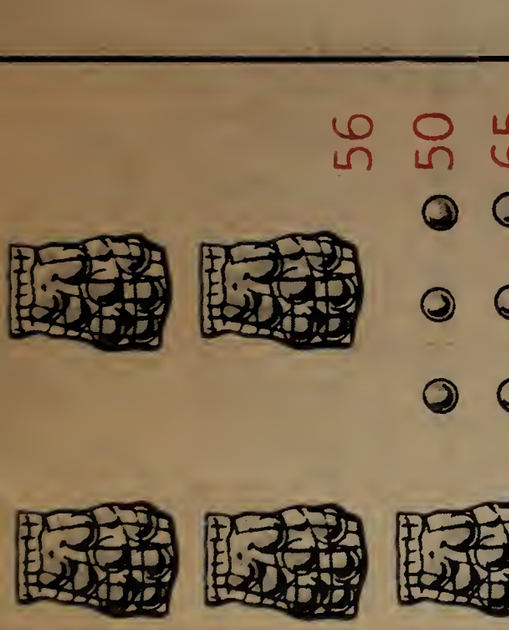


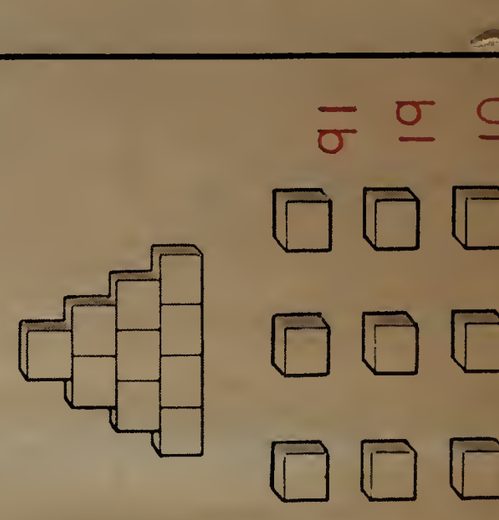
Review: Measurement of Capacity (Page 70 **Numbers We See**). Tell the children that the red marks above each container show how many times it is to be filled with water, which is then to be emptied into a pail. If they will pour more water from one container than the other, tell them to put this mark, ●, in the square under the container from which they will pour more water, and this mark, ○, in the square under the container from which they will pour less water. If the amount of water is the same for both, have them put this mark, =, in each square. If they cannat tell from which container they will pour more water, have them put this mark, ≋ (scribble), in each square.

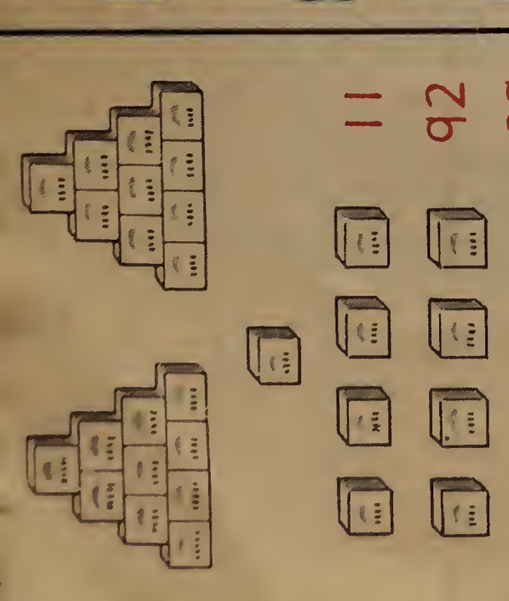


Review: Number System (Page 70 **Numbers We See**). The work on this page is like that on page 80. Be sure the children accept the fact that there are 10 objects in each pile, bag, bundle, etc. Tell them to find out how many objects are in each picture and then to draw a circle around the red number that shows the correct number of objects.









Review: Money *(Page 70* ***Numbers We See****).* Direct attention to the first picture an the red strip (dime and nickel). Then say: "Natice that there are two white pictures that belong with this red picture [paint ta them]. If the coins in the first white picture wauld buy mare than the coins in the red picture, put this mark, ●, in the red answer square. If they would buy less, put this mark, ○, in the square. If they would buy just as much, put this mark, =, in the square. How do the same for the ather white picture." The children should work independently with the ather exercises. Remind them that there are twa pictures of cains to use with each red strip picture.

Finding Groups (Page 70 **Numbers We See**). Children will find this page interesting because of its puzzle aspect. Say: "On this page you are to find groups of 1, 2, 3, and so on up to 10. Each group has a number hidden in it that tells how many there are in the group. When you decide how many there are in a group, look for that number and mark over it with your pencil. Look at the toy trees. How many trees are there? Now find the 3 that is hidden in the trees and mark over it with your pencil. Be sure you always decide how many toys are in each group before you look for the number that is hidden."

Directions continued

from page 1 the dog to the square that has this mark, ●, in it. Inspect each child's book to see that he understands. Tell the children that the solid circle means that there are many dogs. Next direct attention to the girls. The children should decide that there are only a few girls. Tell them to look at the small picture of the girl and draw a line from it to the square that has this mark, O, in it. Be sure the children understand that the solid circle means **many** and the open circle means **few.** Finally, tell them to look at each small picture, find the graup af things in the big picture that it stands for, decide whether there are many or few of those things in the big picture, ond draw a line from the object in the little picture to the proper answer square.

from page 3 Remind them that they show that they were thinking of the country by putting the mark on the red barn.

When the children have finished, hove them pretend that these pictures show things that Carol saw in the city and make the same decisions abaut many and few. This time they are to put the mark on the tall building at the bottom of each picture. Explain to the children that the tall red building stands for the city, just os the red barn stands for the country.

Because of differing experiences, the children may vary in their answers. Encourage them to discuss these differences. Let them talk abaut their answers to determine whether ar nat they understood the meaning of many and few and are aware that many in one situation may be few in o different situotion.

from page 7 If there are, put this mark, ●, in the little red square on the white strip. If there are fewer drums in the white picture, put this mark, O, in the little red square. If there are as many drums in the white picture os there are in the red picture, put this mark, =, in the little red squore." If the children have difficulty finding the correct answer, let them use markers or put marks on the drums in the white picture. Say: "Look at a drum in the red picture. Put a marker (ar make a mark) on a drum in the white picture. Look at another drum in the red picture. Put a marker (or make a mark) an another drum in the white picture. Do this far as many drums on the red picture as you can. What mark should you put in the red squore?" Have them continue in the same way for the other pictures.

After the children have completed work with this strip, have them move the red strip from page 5 back until its edge is against the solid black vertical line an page 7. The children should proceed independently with the pictures on this white strip just as they did for the first white strip. Tell them to use the other three white strips in the same way. If necessary, give separate instructions far each of the other three white strips. The illustrations below show the first and last positions of the strip and the alternote way of using the strip. With either method, paper clips can be used to hold the strip in positian.

from page 12 Be sure the children understand that they ore to encircle some groups of two and some groups of three in each of the two bottom pictures. Explain that the circles they draw must not overlap and that they must not use an object more thon once. Hove the children use crayons of one color for circling groups of two and crayons of another color for circling groups of three. Encourage the children to plan the groups so there will be no objects left over.

from page 19 attention to the first picture ogain and say: "Now find the largest (or longest) horn and put this mark, ●, in the blue square under it. Now find the smallest horn and put this mark, O, in the blue square under it. If there are any horns that are the some size, put this mark, =, in the squares under them." Direct the children to continue in this way for the other pictures. The children may be directed to find the largest (or tollest, longest) object and mark the blue squares, then to find the smallest (or shortest) object and mark the squores, and finally to indicate those objects that are equal in size. Be sure to warn the children that some pictures may not have a largest ar a smallest object, or that there may not be two or mare objects of the same size in some of the pictures.

from page 23 square in the carner of the picture. If it shows any groups that are not two groups of four, put this mark, ≋ (scribble), in the blue answer square."

When the children have finished this part of the work, direct attention to the picture of the blue tops, and follow the same procedures, having them identify all pictures that shaw four groups of two tops by putting an X in the answer square, and indicating pictures that show any other groups by scribbling in the answer square.

Tell the children that they will use the pictures in the blue strip with the work on another page.

from page 37 that tells how many times you put your stick down." Direct the children to let the circle remoin os it is if the distance is **almost** or **not quite** that number af sticks. If the distance is o **little more than** or **farther than** that number of sticks, direct them to fill in the circle with pencil or crayon. The children can work independently on the other exercises.

from page 39 Continue in the same way for the other pictures.

"Look ogain at the block numbers for the dogs. Number 8 has a little square after it. Counting from this side [left], find dog number 8 and put this mark, X, **under** it. Do this for each of the other rows of animals.

"Next look at the brown numbers for the dogs. The number 7 has a mork beside it. Find dog number 7, counting from this end [right]. Put this mork, X, **above** dag number 7. Do this for each of the other rows of animals."

from page 41 the football is in Row 1 Box 1, the teddy bear is in Row 3 Box 8, etc. Then direct the children to draw the pictures in the correct boxes, as indicated by the brown numbers. The pictures indicated in brown can also be drown in baxes located from the **top** and the **right** to provide additional experience for the children. Be sure to relocate the rows and boxes for them before letting them proceed with this third activity.

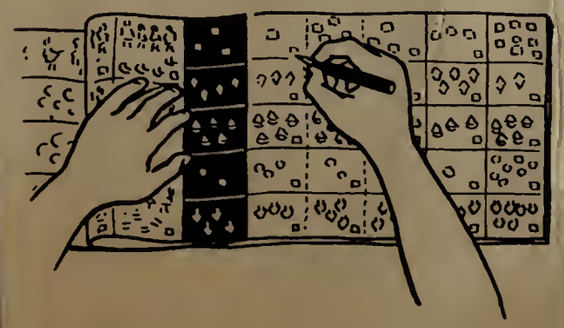
from page 51 If both groups have the same amount, put this mark, =, in both squares. If you can't tell which group has more berries or whether they have the same amounts, put this mark, ≋ (scribble), in each square." When the wark has been completed, let the children talk obout the pictures ond their reasons for deciding as they did.

from page 53 If you will pour the same amounts from both, put this mark, =, in both squares. If you can't tell from which one yau will pour the larger amount, put this mark, ≋ (scribble), in both squares. Do this for each picture on the page." Warn the children that they are not to use the pictures on the brown strip with the work on this page.

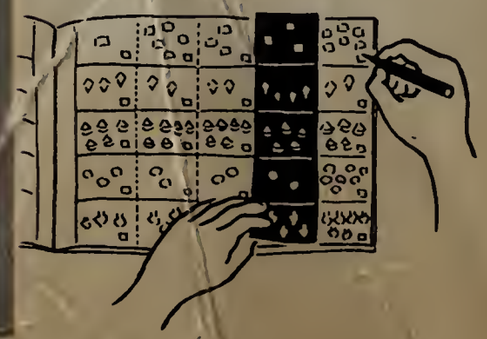
from page 74 When they count only one pile, tell them to draw a line at the top of the pile. When oll the pictures have been used, continue to call decade numbers, but instruct the children to join the piles counted at the **bottom.** It may be odvisable to mark your boak ahead of time os o guide for calling the numbers.

Starting Position: Page 5 can easily be held in position on poge 7 by using one hand. The child is ready to start marking poge 7.

Finishing Positian: The child has moved page 5 to the left four times. He is reody to mark the last strip on page 7.



Alternative Method: The red strip has been cut off poge 5 ond placed on page 7 in the firs positian.



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Hartung
Van Engen
Mahoney

Scott, Foresman

Our Number Workshop